

# **REMOTE CONTROL SYSTEM AND METHOD FOR INTERACTING WITH BROADCAST CONTENT**

## **RELATED APPLICATIONS**

5        This application is a continuation-in-part of U.S. Patent Application  
No. 10/439,121, filed May 15, 2003 and entitled "Method and System for Verifying  
Exposure to Message Content Delivered Via Outdoor Media or in a Concentrated  
Format," which claims priority to U.S. Provisional Patent Application No. 60/381,149,  
10        filed May 16, 2002 and entitled "Mass Media Advertising Distribution and Usage  
System," and which is a continuation-in-part of U.S. Patent Application No. 09/820,482,  
filed March 29, 2001 and entitled "Method and System for Communicating Advertising  
and Entertainment Content and Gathering consumer Information," now U.S. Patent  
No. 6,606,745, which claims priority to U.S. Provisional Patent Application  
No. 60/239,631, filed October 12, 2000 and entitled "System and Method for Using  
15        Linked Sponsorships to Increase Mass-Market Appeal of Content." Additionally, this  
application claims priority to U.S. Provisional Patent Application No. 60/417,877, filed  
October 11, 2002 and entitled "A System for Dual, Segregated Broadcasting and Data  
Collection Networks, and Supplemental Remote Control device Design, to Allow  
Consumer Reaction to CRÄV Ads and Response to Interactive Content," and to U.S.  
20        Provisional Patent Application No. 60/453,150, filed March 10, 2003 and entitled "An  
Internet-Enabled Universal Remote Control device Enabled to Respond to Reactive  
CRÄV Ad Queries, While Also Enabling Voice-Over Internet Protocol Functions, And  
Other Optional Functions, Including Instant Messaging And Internet Chatting, Credit Card  
Reader Functions, And Mathematical Calculations." The complete disclosure of each of  
25        those priority documents is hereby fully incorporated herein by reference.

## **FIELD OF THE INVENTION**

      The present invention relates to interacting with broadcast content. Specifically,  
the present invention relates to interacting with broadcast content via an interactive remote  
30        query response device coupled to a distributed computer network, such as the Internet.

## BACKGROUND OF THE INVENTION

In the traditional advertising model, broadcast media (e.g., TV networks, radio stations, newspapers, magazines) develop entertainment content (e.g., a TV show) of interest to consumers. The consumers are persons who may use an Advertiser's commodity or service, and who view, hear, read, or otherwise absorb or become exposed to the entertainment content, as well as advertising content ("ads"). The Advertisers are entities that distribute the ads to induce the consumers to buy, use, or do something. The media deliver the entertainment content and the ads to the consumers (e.g., over the air, by cable transmission, by print media mass distribution, outdoor media, Internet, and private networks). Media may charge the consumers for the entertainment content delivery, but typically media receive most revenue from the Advertisers in exchange for delivering ads with the entertainment content.

Promoters initiate, develop, generate, and/or distribute entertainment content, attracting many of the consumers and, in turn, attracting the Advertisers. The Advertisers sponsor the entertainment content by paying the Promoters to deliver the ads with the entertainment content. Advertising fees generally increase as the number of the consumers exposed to the ads increases. The Promoters use the advertising fees to offset the Promoters' costs to produce and distribute the advertising content and to make a profit. The consumers usually do not pay to see, hear, or otherwise absorb or become exposed to the entertainment content. The consumers also do not receive payment for seeing, hearing, or otherwise absorbing or becoming exposed to the ads. The consumers' traditional reward is the ability to see, hear, and enjoy the entertainment content for little or no charge in exchange for tolerating the ads.

Recent technological advancements (i.e., the Internet) have caused an increase in possible entertainment outlets. With this increase, the consumers are distracted by multiple entertainment forms. As a result, the Advertisers have more difficulty reaching mass numbers of the consumers. In addition, the Promoters have more difficulty guaranteeing that many of the consumers will watch, hear, or otherwise absorb or become exposed to the entertainment content and the ads. This phenomena has led to lower advertising fees and lower profits for the Promoters.

The Advertisers' goal is to provide the consumers with memorable ads that include information on the Advertisers' product or service. However, the consumers typically

ignore or avoid the ads. The consumers often "tune out," change the channel, or walk away when the ads are presented. In addition, the consumers increasingly turn to less advertising-dependent entertainment forms (e.g., premium channels), or use technology (e.g., video recorders, personal recording devices (PRDs), etc.) to skip the ads.

5 Advertising can be divided into two classes: mass media advertising and targeted advertising. Mass media advertising (e.g., over a broadcast network such as TV, cable, satellite, radio, newspaper, magazine, mass mail, mass e-mail, streaming Internet, etc.) sends broadly based advertising messages to a wide spectrum of the consumers. Mass media broadcasting of advertisements comprises presenting one or more advertisements  
10 through the broadcast network such that anyone receiving the broadcast network receives the same advertising content, regardless of the person's demographics or other criteria. For example, each person tuning into the same TV channel, streaming Internet website, or radio station, or reading the same magazine page, newspaper page, or billboard, will receive the same entertainment and advertisement content. Accordingly, those  
15 advertisements comprise mass media broadcast advertisements. On the other hand, targeted advertising focuses on delivering specific, personalized advertising to the consumers that meet a demographic profile specified by the Advertisers. Mass media advertising is usually less expensive per impression than targeted advertising. However, targeted advertising is usually more effective and has become less expensive per  
20 impression as technology has progressed. As a result, the effectiveness of mass media advertising has been questioned.

Consumers already desire to interact with televised and radio broadcast content. The success of game shows (and radio talk shows) over the decades is an indication of that desire to interact. However, consumers typically have been relegated to vicarious  
25 interaction (i.e., answering televised trivia questions "out loud" while the same occurs on screen by the real "players," and receiving only insignificant benefits, such as the feeling of answering a question correctly). Entertainment has traditionally been the only reward for consumers who view or listen to potentially interactive broadcast content. To date, a broadcast program has not been deployed that has allowed mass consumers to interact in a  
30 meaningful, rewarding manner.

The CRAV ad process and system, as described in U.S. Patent No. 6,606,745, provides consumers with tangible benefits by interacting with rewarding ads, which are

broadcast over mass media networks. That process involves broadcasting advertising content, communicating a query about a selected portion of the advertising content, collecting responses to the query, and awarding a prize to a consumer that provided a response comprising a correct reply to the query. A correct reply to the query indicates that the responding consumer was exposed to the advertising content. An infrastructure exists that can gather the mass query responses, including personal computers connected to the Internet and telephones connected to the telecommunication networks. However, some infrastructure limitations exist that could pose a "bottleneck" to the number of mass query responses able to be quickly collected. Consumer reliance on the traditional telephone as an interactive query response device may cause some consumers desiring interaction with some level of frustration, as there simply may not exist sufficient traditional telephone ports and interactive voice response ports able to cost-effectively handle all the potential traditional phone calls from interacting consumers. Additionally, traditional phone calls are time consuming, and could be cumulatively very expensive to either consumers or Promoters (costing upwards of \$0.30 per call), based upon the number of calls and length of interaction needed to fully register all consumer responses via telephone. Some limitations also exist on the entire existing national telephone infrastructure to be able to handle lengthy, simultaneous interactive calls from many millions of consumers. Accordingly, facilitating interaction over the Internet is needed to overcome the deficiencies of telephone interaction.

The lack of standardized, industry-wide accepted software and hardware protocols, and reliance on the deployment of new technologies and devices to capture the consumer's desire to interact, have delayed mass implementation of interactive television. Attempts to date to provide interactive television content have left a majority of consumers unable to interact easily with interactive content. Conventional interactive systems that require the addition of another "box," and the related installation challenges, along with the introduction of another remote control device into the room where the hardware is to be utilized, pose a further negative to the consumer.

Some attempts to allow consumer interaction over the Internet, such as "Enhanced TV," allow consumers, logged into a personal computer connected to the Internet, to interact with synchronized questions posed on-air or on a web site. However, that process has not been accepted by a majority of television viewers, in large part because some

consumers are inconvenienced by not being able to watch a television program from their normal viewing location if required to be nearby a computer, or if they are inconvenienced by having to utilize a second non-television related device to interact, or do not find the rewards for interacting significant enough to warrant the extra effort needed to interact.

5 In view of the foregoing, there is a need for a cost-effective, entertaining, rewarding, and effective way of enticing consumers to become exposed to mass media broadcast content and for allowing the consumers to easily interact with and respond to the broadcast content. A need also exists for verifying consumer immersion in the broadcast content by verifying that individual consumers were exposed to the broadcast content. A  
10 further need exists for verifying consumer immersion by receiving consumer responses to queries about the broadcast content. A need also exists for an interactive remote query response device that allows the consumers to interact with advertising or entertainment broadcast content while remaining immersed in the broadcast content, i.e., without going to a personal computer or telephone to respond to the queries and without carrying a  
15 personal computer. Yet another need exists for automatically tuning a broadcast receiver at the time when the receiver will present pre-selected, broadcast content.

## **SUMMARY OF THE INVENTION**

The present invention provides an Internet-connected, interactive remote query  
20 response device that allows consumers to easily interact with and respond to CRAFT immersion verification queries, or any other interactive queries distributed via mass media broadcasts. The interactive remote device can allow consumers to interact with broadcast content, without requiring the consumer to remain physically seated at a personal computer or to carry a wireless laptop computer or personal digital assistant. The  
25 interactive remote device also can provide automatic or manual remote control of the broadcast receiver to tune the receiver to a desired station channel for presentation of the broadcast content.

As part of a dual, segregated interactive infrastructure comprising a broadcast network and an information gathering system, the present invention provides a  
30 cost-effective, consumer-friendly, simple-to-use interactive remote query response device that can easily and quickly connect consumers viewing interactive television content to an Internet-based system that collects interactive responses and poses additional queries.

Consumers can respond via the interactive remote query response device to queries broadcast with the broadcast content. Additionally, the interactive remote query response device can present the query, additional queries, polling questions, or other questions to the consumer. Then, the consumer can respond to those queries via the interactive remote query response device. Accordingly, the consumer can interact with the broadcast content without leaving the location from where they typically view television broadcasts (i.e., a living room couch, bedroom, study, etc.). Additionally, the consumer can interact with the broadcast content without moving to a personal computer or carrying a wireless personal computer, such as a laptop computer or personal digital assistant.

Responses submitted via the interactive remote device are forwarded to an information gathering system, such as a server computer connected via a distributed computer network, such as the Internet. The information gathering system can process the responses. Alternatively, the information gathering system can forward the responses to a data storage center to process the responses.

The present invention can allow interaction with broadcast entertainment or advertising content. One aspect of the present invention allows interaction with a broadcast Consumer Rewarded Advertising Vehicle Immersive Ad or Ad Bundle ("CRĀV Ads"). The CRĀV Ads can comprise an advertising vignette ("vignette") and a verification query ("query") comprising a question about a selected portion of the vignette. An optional immersion alert ("alert") can inform consumers of an upcoming broadcast of the CRĀV Ads. The CRĀV Ads can be visual and/or audible. The CRĀV Ads can be broadcast via spoken, printed, displayed, or any possible means, or by any combination of possible means. The consumer can respond to the query via the interactive remote query response device. Additionally, the interactive remote query response device can present the query to the consumer. The interactive remote query response device can automatically tune a broadcast receiver to the station channel upon which the broadcast content will be presented.

These and other aspects, objects, and features of the present invention will become apparent from the following detailed description of the exemplary embodiments, read in conjunction with, and reference to, the accompanying drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a block diagram illustrating the primary components of an exemplary embodiment of the present invention.

Figure 2 is a flow diagram illustrating an overview of an exemplary CRÄV Ad process.

Figure 3 is a flow diagram illustrating an exemplary process describing how the Promoters sell the CRÄV Ads to the Advertisers.

Figure 4 is a flow diagram illustrating an exemplary process describing how the Promoters and the Advertisers use the broadcast network to promote future CRÄV Ads.

Figure 5 is a flow diagram illustrating an exemplary process describing how the privacy option applies to the invention.

Figure 6 is a flow diagram illustrating an exemplary process describing how the Promoters use the broadcast network, the device, the information gathering system, and the data storage center to communicate the CRÄV Ads to the consumers and to interact with the consumers.

Figure 7 is a flow diagram illustrating an exemplary process describing how the Promoter communicates the alert, the vignette, and the query using the broadcast network.

Figure 8 is a flow diagram illustrating an exemplary process describing how the consumers answer the CRÄV Ads.

Figures 9A and 9B, together comprising Figure 9, are picture diagrams illustrating an exemplary nationwide network for gathering CRÄV Ad responses.

Figure 10 is a picture diagram illustrating how the information gathering system sends the registration and the response information to the data storage center in an exemplary embodiment.

Figure 11 is a flow diagram illustrating an exemplary process describing how the Promoters select winners and distribute prizes.

Figure 12 is a flow diagram illustrating an exemplary process describing an overview of a CRÄV Ad process.

Figure 13 is a flow diagram illustrating an exemplary process describing how the ad slots are sold.

Figure 14 is a chart illustrating how the ad price is determined in an exemplary embodiment.

Figure 15 is a picture flow diagram illustrating an exemplary CRÄV Ad process for ABS and ACME to promote future CRÄV Ads.

Figure 16 is a chart illustrating a CRÄV record in an exemplary embodiment.

5 Figure 17 is a flow chart illustrating how ABS broadcasts the CRÄV Ads in an exemplary embodiment.

Figure 18 illustrates the CRÄV Ad the consumers see in an exemplary embodiment.

Figure 19 is a flow diagram illustrating how the CRÄV Ads are answered by the consumers in an exemplary embodiment.

10 Figure 20 is a flow diagram illustrating how the data storage center selects winners and distributes prizes.

Figure 21 illustrates a CRÄV Ad broadcast over a convergence of mass media formats according to an exemplary embodiment of the present invention.

15 Figure 22 is a block diagram depicting a system for remotely interacting with broadcast content according to an exemplary embodiment of the present invention.

Figure 23 is block diagram depicting an interactive remote control according to an exemplary embodiment of the present invention.

Figure 24 is a flowchart depicting a method for remotely interacting with broadcast content according to an exemplary embodiment of the present invention.

20 Figure 25 is a flowchart depicting a method for tuning a broadcast receiver to the desired station channel according to an exemplary embodiment of the present invention.

Figure 26 is a flowchart illustrating a method for presenting a query on the interactive remote control according to an exemplary embodiment of the present invention.

25 Figure 27 is a flowchart depicting a method for communicating a response to the query via the interactive remote control according to an exemplary embodiment of the present invention.

Figure 28 is a flowchart depicting a method for remotely controlling presentation of broadcast content according to an exemplary embodiment of the present invention.

30 Figure 29 is a flowchart depicting a method for tuning a broadcast receiver to the station channel on which the receiver will present broadcast content according to an exemplary embodiment of the present invention.

Figure 30 is a block diagram depicting an interactive remote control according to an alternative exemplary embodiment of the present invention.

Figure 31 illustrates the form factor of an interactive remote control 3100 according to an exemplary embodiment of the present invention.

5        Figure 32 is a flow chart depicting a method for real-time capturing of audience share information for broadcast content according to an exemplary embodiment of the present invention.

10       Figure 33 is a flow chart depicting a method for determining whether a particular recipient received broadcast content according to an exemplary embodiment of the present invention.

## **DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS**

The interactive remote query response device according to the present invention can allow a recipient to interact with broadcast content without moving from the viewing  
15       or listening area in which the broadcast content is presented. For example, the recipient can view broadcast content and can respond to a query about the broadcast content via the interactive remote query response device coupled to the Internet. Accordingly, the recipient does not have to leave the viewing area to respond to the query from a personal computer, and the consumer does not have to carry a separate personal computer such as a  
20       laptop computer or personal digital assistant. The interactive remote query response device also can automatically or manually tune a broadcast receiver to the station channel upon which the broadcast content will be presented.

Promoters can increase an ad's appeal via interaction via the present invention, while substantially and cost-effectively enhancing an Advertiser's promotion and retention  
25       of its products and services. When compared to traditional mass media advertising, an exemplary embodiment delivers ads that cause the consumers to fully immerse themselves in the ad. An exemplary embodiment can deliver ads in print, by radio, by TV, as a game show, or by any other method that communicates with the consumers.

Immersion is a heightened attention level that causes the consumers to remember  
30       the ads. Immersion is the highest, most effective, and valuable attention level. Immersion helps the Advertisers achieve a maximized share of the consumers' mind for their product. Products are remembered easier and faster than competing products.

Immersion is enhanced by several methods. First, immersion is enhanced when the ad triggers an immediate emotional response within the brain, such as a warning or alert signal. This signal causes the consumers to pay more attention to the ads, and increases the likelihood the consumers will remember the ads. When the consumers interact with the ads, as opposed to passively viewing or hearing the ads, the consumers are more likely to remember the ads. A memorization request also increases immersion by testing the consumers ability to recall the ads. In addition, extended exposure, which is obtained by a longer effective ad length, increases the likelihood of immersion. Effective length begins from the first moment one recognizes the brand advertised. Another advertising technique that increases immersion is using alternate, multiple media vehicles for distributing advertising (i.e., using print or Internet-based advertising simultaneously, or following, TV advertising). Rewards also help to create immersion because the consumers like challenges and rewards, and likable ads are more readily and easily recalled.

#### **CRÄV Ad Description**

Consumer Rewarded Advertising Vehicle Immersive Ad Bundles ("CRÄV Ads") provide a process for Promoters to increase viewership and immersion, as described in U.S. Patent No. 6,606,745, which is hereby fully incorporated herein by reference. A CRÄV Ad example will be discussed while referring to Figure 18 later in this document. However, for purpose of defining the CRÄV Ad, it is useful to refer to Figure 18 at this time.

Turning now to Figure 18, an exemplary CRÄV Ad is displayed. The CRÄV Ad is an ad including at least an advertising vignette ("vignette") 1810 and a verification query ("query") 1820. An immersion alert ("alert") 1805 also can be included. In addition, an optional correct answer ("answer") 1830 may be added. These parts create a CRÄV Ad that may be any duration. The CRÄV Ad may be visual and/or audible. The CRÄV Ad may be spoken, printed, displayed, heard, or communicated by any other possible means, or any combination of possible means. A CRÄV Ad, or a series of CRÄV Ads, may also be the basis for an entire show.

Some or all of the components of the query 1820 may be "detached" from the vignette 1810 (i.e., the vignette 1810 may be in print and the query 1820 may be posted

on-line or by phone). In addition, the response time for the query 1820 may be limited to cause the consumers to memorize the vignette 1810 for expedited recall (from memory) when asked the query 1820. Similarly, the alert 1805 and/or the answer 1830 may be detached from the vignette 1810 and/or the query 1820. Accordingly, the vignette, query, alert, and offer of a reward can be communicated via the same communications media or different communications media. The communications media can comprise a broadcast network 105 or a response device 111.

The alert 1805, which is optional (as indicated by the dashed lines), is a warning to the consumers that the upcoming vignette 1810 should be memorized so the consumers may become eligible to win a reward. The alert 1805 could be any cue or operational procedure that leads the consumers to believe that immersion may lead to a reward. The alert 1805 may be as simple as a logo (such as a CRÄV logo), a sound, or some other discrete notice. The alert 1805 may also include much more extensive data. The alert 1805 may include the product's brand name and information on the identity of the available rewards. By providing branding during the alert 1805, the Advertisers effectively begin the CRÄV Ad's exposure time. The alert 1805 is an urgency signal and a memorization request. These advertising techniques increase the likelihood of the consumer remembering the ad. The alert 1805 may be any duration.

Following the alert 1805, a vignette 1810 is broadcast. The vignette 1810 may be a conventional commercial for a product or service or any other information designed for presentation to a consuming audience. This may include key product or service benefits, pricing information, image building information, etc. The vignette 1810 may be any duration.

Following the vignette 1810 broadcast, the query 1820 is broadcast. The query 1820 includes one or more questions. One question may be linked to the vignette 1810. This question is designed to require the consumers to remember certain information. The other questions may ask for public opinion, trivia, or other information, and these questions may be asked on-line or off-line. The query 1820 questions may be displayed on a separate screen following the vignette 1810, asked by a crawl-line below the entertainment content, or shown in an alternative way, such as off-line. The query 1820 may serve to increase the effective length of the CRÄV Ad, even though the traditional ad (i.e., video or audio clip) extends for a conventional duration, because the consumers must

continue concentrating on the product as advertised during the immersion verification and query response process. During the query 1820, the Promoters or the Advertisers may provide potential multiple choice answers or require the consumers to provide the answer without the aid of multiple choice answers. The query 1820 includes one or more questions and may include reward information, registration or login instructions, multiple choice answers, a "time remaining" counter, and brand information. The CRÄV Ad may end following the query 1820.

The answer 1830, may be added and is optional, as shown by the dashed lines in the answer 1830. The answer 1830 extends the CRÄV Ad's effective length. The answer 1830 includes the answer or answers to the query's 1820 one or more questions, where applicable. The answer 1830 also may include logo or other information. The answer 1830 may be broadcast via a TV medium, or distributed by an alternate communications medium (e.g., radio, print, Phone 145, Internet 130).

Another option, called the "sneak peek" vignette, may be incorporated. The sneak peek may be identical to the CRÄV Ad vignette 1810. The sneak peek may also contain other information to help the consumers answer the query 1820. The sneak peek is not shown during the actual CRÄV Ad, but is shown prior to the CRÄV Ad. The sneak peek may be featured several minutes, hours, days, weeks, etc. before the CRÄV Ad. The sneak peek vignette may be indicated by a logo, sound, or another method. Alternatively, the consumers may be informed only that the sneak peek will occur at some point during a particular show. The consumers are told one or more ads are CRÄV Ad sneak peek vignettes. The consumers will then pay greater attention to the particular commercial, or all the possible commercials so they may get additional information to help them answer the CRÄV Ad query 1820. For example, a sneak peek could read: "1 of the following 6 ads will be featured in a CRÄV Ad next Sunday. Please pay attention to ALL of them, because we will not tell you at this time which ad is the CRÄV Ad." This same process could apply to the vignettes, in addition to the Sneak Peaks. Thus, for example, during the communication of numerous ads, an alert in the form of a logo could appear on the corner of the ads, which are in the form of vignettes. After communicating the vignettes, one or more Queries with immersion verification questions for one or more of the vignettes would be shown (i.e., at the bottom of the screen while the entertainment content

continues). When the user calls, the user could be required to answer one or more of the shown immersion verification questions.

### CRAV Ad System

Figure 1 is a block diagram illustrating the primary components of an exemplary embodiment of the present invention. Turning to Figure 1, the CRAV Ad system 100 includes a broadcast network 105, the consumers 110, an answering device ("device") 111, an information gathering system 112, and a data storage center 195. The consumers 110, the Advertisers, the Promoters, or other entities, use the present invention. The consumers 110 are the recipients of the ads and are persons who may use the Advertiser's commodity or service, who view, hear, read, or otherwise absorb the entertainment content and the ads. The Advertisers are entities that distribute the ads to induce the consumers to buy, use, or do something. The Promoters initiate, develop, generate, and/or distribute entertainment content attracting many of the consumers, and in turn attracting the Advertisers. While the invention is described in the context of the consumers, the Advertiser, and the Promoters, those experienced in the art will recognize that other entities can be used.

The broadcast network 105 is a means of connecting the consumers 110 with the entertainment content and the ads. The broadcast network can comprise TV, cable, radio, printed media (magazines, newspapers) outdoor media (billboards, signs, buses) mass mail, mass e-mail, streaming Internet, private networks, or any other mass media broadcast.

The device 111 is a means of communicating the registration and the response information to the information gathering system 112. The device 111 also can be a means of communicating with the consumers 110 by broadcasting an immersion verification question and other questions, and subsequently forwarding related registration and response information to the information gathering system 112. The information gathering system 112 is a means of forwarding the registration and the response information to the data storage center 195. The data storage center 195 is a means for storing the registration and response information.

The broadcast network 105 may include a Broadcast TV Network 120, a Private Network 125, a Cable Network 135, an Internet Network 130, a Satellite Network 140, or

any Other Network 141 (e.g., newspaper). Those experienced in the art will recognize numerous communications networks and systems (including presently available systems and future systems) may be substituted or interchanged with the broadcast network 105. For example, the broadcast network 105 also can comprise any of radio, outdoor media (billboards, signs, buses); print media (newspapers, magazines), direct mail, or other broadcast network.

The response device 111 can comprise a Phone 145, a Personal Digital Assistant ("PDA") 150, an Interactive TV 155, an Internet Computer 130, a Hospitality Industry Private Network (i.e., a Sports Bar and Pub device) 165, or any other device 166. In an exemplary embodiment, the other response device 166 can comprise a printed response device, which can be completed by a consumer and delivered subsequently to the data storage center 195. For example, the printed response device can comprise a handwritten or typewritten response.

The devices 111 can include computer-related devices such as cellular phone networks, two-way pagers, and two-way contained network devices such as proprietary NTN systems found in numerous restaurants and pubs throughout the United States. Different instructions and methods may be used to register or answer. Those experienced in the art will recognize numerous devices (including presently available devices and future devices) may be substituted or interchanged as the device 111. In addition, those experienced in the art will recognize that one device 111 can be used to register, and another device 111 used to respond to the CRÄV Ad.

The information gathering system 112 may include numerous service providers ("SPs"), including a Phone Company SP 170, a PDA SP 175, a TV SP 180, an Internet SP 185, a Private Network SP 190, and any other information gathering system 191. For example, the other information gathering system 191 can comprise a private delivery network, such as the U.S. Postal Service, a facsimile machine, or other system. Those experienced in the art will recognize numerous distribution systems (including presently available systems and future systems) may be substituted or interchanged as the information gathering system 112.

The information gathering system 112 connects to a data storage center 195, which stores data gathered by the information gathering system 112. The data storage center 195 may include a Personal Data Center ("PDC") Database 197 and a Data Compiling and

Storage ("DCS") Center Database 196. The data storage center 195 includes registration information and response information, random winner selection, and long-term storage of data collected for future data mining ventures. The PDC 197 stores the consumers' personal information, which may include the name, address, social security number (which is typically obtained only from prize winners for tax reporting purposes), personal ID number, phone number, etc. The DCS 196 may store demographic data collected during registration, a CRÄV ID, and CRÄV Ad query 1820 answers.

The data storage center 195 may also include a Privacy Database 199. The Privacy Database 199 is used when the Promoters decide to implement privacy protection for the consumers 110 that respond to the CRÄV Ads, who have provided personal and confidential data while registering. The Privacy Database 199 requires records from the PDC 197 and the DCS 196 to match before consumers' identities are matched with demographic and historical records. This matching helps ensure security, data protection, and isolation levels.

#### **CRÄV Ad Process Overview**

Figure 2 is a flow diagram illustrating an overview of an exemplary CRÄV Ad process. Turning now to Figure 2, an exemplary CRÄV Ad process 200 is initiated at the "START" step 201. In step 205, the Promoters sell the CRÄV Ads to the Advertisers. In step 210, the Promoters and the Advertisers use the broadcast network 105 to promote future CRÄV Ads. In step 215, the Promoters use the broadcast network 105, the device 111, the information gathering system 112, and the data storage center 195 to communicate the CRÄV Ads to the consumers 110 and to interact with the consumers 110. In step 220, the Promoters use the device 111, the information gathering system 112, and the data storage center 195 to gather the consumers' registration information and response information. In step 225, it is determined whether or not the registration and/or the response information will be used for purposes other than awarding prizes. If the answer to step 225 is "YES" and the registration and/or the response information will be used, the process moves to step 226, where the Promoters edit and/or distribute the registration and the response information to the Advertisers and other interested entities. If the answer to step 225 is "NO" and the registration and the response information will not be used, the process moves directly to step 230. In step 230, the Promoters use the

data storage center to select the winners and distribute the prizes. The process then proceeds to the "END" step 299 and terminates.

### **CRÄV Ads are Sold**

5           Figure 3 is a flow diagram illustrating an exemplary process describing how the Promoters sell the CRÄV Ads to the Advertisers, as set forth in step 205 of Figure 2. Turning now to Figure 3, an exemplary CRÄV Ad process 205 is initiated at the "START" step 301. In step 305, the Promoters decide how many of the CRÄV Ads and the regular ads to communicate and how much to charge for each ad. In step 310, the Promoters sell  
10   the CRÄV ads and the regular ads. The process then moves to step 210 of Figure 2.

          The CRÄV Ads may be priced in numerous ways. For example, the price may be dependent on the program's audience size (i.e., ratings), or may be priced based on an auction or bidding process, where the CRÄV Ads are rewarded to the highest bidder. To establish pricing, the Promoters may analyze the existing program profitability based on  
15   standard production, promotion, and broadcast costs. This may be offset by standard advertising fees for standard advertising. The Promoters' CRÄV Ad price may include the value of a larger audience size and a higher quality of immersion among consumers 110. This legitimizes a higher cost-per-minute advertising fee, with the additional fee revenues helping to offset CRÄV Ad reward costs, CRÄV Ad licensing and promotion costs, and  
20   query 1820 response management process costs.

          When determining CRÄV Ad prices, the following may also be considered: the promotion costs, the simultaneous broadcast venues used, the number and type of immersion rewards, the number of questions in the query 1820 (i.e., immersion verification question, polling question, trivia-based questions of varied difficulties to  
25   reduce the number of fully correct responses), on-air versus off-air immersion verification responses, registration requirements, query 1820 response gathering methodology, and winner selection and prize awarding responsibility. The Promoters must also determine if the consumers 110 will be required to answer one or more special Advertiser-designed questions during the immersion verification process. This market data may be very  
30   valuable to the Advertisers, and may further substantiate the fee being charged by the Promoters. The Promoters may also elect to add one or more special public opinion questions to the query 1820. This data may be related to the Promoters' other programs,

may determine the consumers' 110 interest levels to certain programming types, or may address any other marketing related issues. These public opinion questions may also be conducted as a service to public opinion agencies, which may pay the Promoters for providing the public opinion response results.

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#### **CRÄV Ad is Presented to consumers**

Figure 4 is a flow diagram illustrating an exemplary process describing how the Promoters and the Advertisers use the broadcast network 105 to promote future CRÄV Ads, as set forth in step 210 of Figure 2. The public can be notified about the broadcast of the CRÄV Ad to maximize the program's audience size. Prior to the communication including the CRÄV Ad, the Promoters provide advance warning to the consumers 110 who may receive programs where the CRÄV Ads will be communicated. This advanced warning may include educational, general public information informing the consumers 110 about the CRÄV Ads, and how successful immersion may result in the consumers 110 receiving substantial rewards. These advance warnings also may include specific prize information, reveal the name and/or logo, and invite registration by the consumers 110 prior to the broadcast. The Promoters and the Advertisers may provide this advanced notice.

Turning now to Figure 4, an exemplary CRÄV Ad process 210 is initiated at the "START" step 401. In step 405, the Promoters determine whether or not to give advanced notice of the future CRÄV Ad broadcast. If the answer is "NO," then the process moves to step 215 of Figure 2. If the answer is "YES," the process moves to step 410, where the Promoters and the Advertisers choose the broadcast network 105 for the advanced notice. The broadcast network 105 that can be used for the advanced notice includes the Broadcast TV Network 120, the Private Network 125, the Cable Network 135, the Internet 130, the Satellite Network 140, or any Other System 141. In step 415, the Promoters and the Advertisers communicate the availability of future CRÄV Ads to the consumers 110 using the chosen broadcast network(s) 105. In step 416, the promoter decides whether to allow the consumers 110 to pre-register. If the answer is "NO," then the process moves to step 215 of Figure 2. If the answer is "YES," the process moves to step 420.

In step 420, the consumers 110 decide whether or not to register to respond to the CRÄV Ads using the device 111. If the answer to step 420 is "NO," the process moves to

step 215 of Figure 2. In one alternative exemplary embodiment, the CRÄV Ad system is simple, and registration is not required. However, in alternative exemplary embodiments, registration is required during the process. Registration allows the Promoters and the Advertisers to collect detailed information about the consumers 110. If the answer to step 420 is "YES," the consumers 110 register, as set forth in step 425. The process then moves to step 215 of Figure 2.

Figure 5 is a flow diagram illustrating an exemplary process describing how the privacy option applies to the registration process, as set forth in step 425 of Figure 4. Turning now to Figure 5, an exemplary CRÄV Ad process 425 is initiated at the "START" step 501. In step 505, the Promoters decide whether to implement the privacy option. The privacy option segregates confidential personal data from demographic data. If the privacy option is used, the data storage center 195 includes the Privacy Database 199, as set forth in step 510. The process then moves to step 515. If the privacy option is not implemented, the process moves directly from step 505 to step 515. In step 515, the consumers 110 register using the device 111, and the process moves to step 215 of Figures 2.

The privacy option is important because it allows the consumers 110 to be less concerned that their personal registration information will be matched with their demographic and response information by outside parties.

### **Registration**

Because the query 1820 may be short in duration, the consumers 110 may not be able to fully register and respond to the CRÄV Ad within the allocated CRÄV Ad time. Therefore, the consumers 110 will usually want to register before the CRÄV Ad is broadcast. Several registration options are available.

Registration information may include a variety of data. In one exemplary embodiment, the Promoters do not want to use demographic information and simply seek to identify the consumers 110 for tracking and prize awarding purposes. The consumers 110 are thus asked to provide simple information where they may be reached and identified if selected as a winner. This information may include a phone number, a social security number (or portion thereof), a birthday, a name, and an address. After providing the registration information, the consumers 110 are provided with a unique "CRÄV ID".

This number may be a randomly generated unique number, or an easily remembered number or a series of numbers (such as a birthday and phone number combination), which may also provide ID information within the number.

In another exemplary embodiment for registration, the Promoters may wish to obtain ID information, product-related information, or public opinion-related information. The demographic profile of each consumer 110 may include age, sex, race, weight, height, zip code, physical home or e-mail address, occupation, individual annual earning, educational background, political affiliation, religious affiliation, family size, number of TVs and computers, Advertiser-related or public opinion survey questions, and prior CRÄV Ad answers (historical response information). A detailed registration may be required for each CRÄV Ad. However, gathering this information for each CRÄV Ad makes the registration process time-consuming, costly, and redundant, and may deter the consumers 110 from submitting a response. Thus, a one-time registration process is also available. In this mode, only changed/updated demographic or ID information (such as a change in marital status, phone number, etc.) is added for each CRÄV Ad response after the original registration. Under this scenario, the original registration information is stored in the PDC 197. As new responses or update information are transmitted to the data storage center 195, the data storage center 195 is updated.

In another alternative embodiment for registration, when only one registration is used (as described above), the Advertisers may have the consumers 110 with existing CRÄV IDs enter additional demographic information to be qualified for the rewards. In this case, new "response" information is added for each additional CRÄV Ad response after the original registration. Under this scenario, the original registration information would be stored in the DCS 196, and as new responses are transmitted to the data storage center 195, the registration information can be added to the data storage center 195. The CRÄV ID would be required before allowing additions to CRÄV Ad records.

### **Broadcast CRÄV Ad and Interaction with consumers**

Figure 6 is a flow diagram illustrating an exemplary process describing how the Promoters use the broadcast network 105, the device 111, the information gathering system 112, and the data storage center 195 to communicate the CRÄV Ads to the consumers 110 and to interact with the consumers 110, as set forth in step 215 of Figure 2.

Turning now to Figure 6, an exemplary CRÄV Ad process 215 is initiated at the "START" step 601. In step 605, the Promoter communicates the alert 1805, the vignette 1810, and the query 1820 using the broadcast network 105. The alert 1805 is a warning to the consumers that the upcoming vignette 1810 should be memorized so the consumers may become eligible to win a reward. The vignette 1810 may be a conventional commercial for a product or service or any other information designed for presentation to a consuming audience. The query 1820 includes one or more questions. In step 610, the consumers 110 answer the query 1820. In step 615, the option to communicate the answer 1830 is provided, based on whether or not the Promoters wish to use this option. The answer 1830 includes the answer to at least one of the query's 1820 question or questions. If the answer to step 615 is "NO", and the answer 1830 is not communicated, the process moves to step 220 of Figure 2. If the answer to step 615 is "YES", the Promoter communicates the answer 1830 after the counter time has expired using the broadcast network 105, as set forth in step 620. The process then moves to step 220 of Figure 2.

Figure 7 is a flow diagram illustrating an exemplary process describing how the Promoter communicates the alert 1805, the vignette 1810, and the query 1820 using the broadcast network 105, as set forth in step 605 of Figure 6. Turning now to Figure 7, an exemplary CRÄV Ad process 605 is initiated at the "START" step 701. In step 705, the Promoter communicates the alert 1805 using the broadcast network 105. The alert 1805 may include a prize description and an Advertiser and/or Promoter logo. The alert 1805 may also include any other information the Promoters, or some other entity, wishes to display. In step 710, the Promoter communicates the vignette 1810 using the broadcast network 105. The vignette 1810 may include an Ad and the Advertiser and/or Promoter logo. The vignette 1810 may also include any other information the Promoters, or some other entity, wishes to display. In step 715, the Promoter communicates the query 1820 using the broadcast network 105. Alternatively, the Promoter can communicate the query 1820 using one or more of the response devices 111. The query 1820 may include questions, possible answers, login response information, a time remaining counter, and the Advertiser and/or Promoter logo. The CRÄV Ad query 1820 may also include any other information the Promoter wishes to include. The process then moves to step 610 of Figure 6.

### CRÄV Ad is answered

Figure 8 is a flow diagram illustrating an exemplary process describing how the consumers 110 answer the CRÄV Ads, as set forth in step 610 of Figure 6. Turning now to Figure 8, an exemplary CRÄV Ad process 610 is initiated at the "START" step 801. In step 802, the device 111 prompts the consumers 110 to enter their CRÄV ID. In step 805, it is determined whether or not consumers 110 have entered a CRÄV ID. If the answer to step 805 is "NO" and the consumers 110 do not enter a CRÄV ID, registration may be allowed, as set forth in step 811. If registration is allowed, the process moves to step 815. If registration is not allowed, the consumers 110 are informed that they must register before they can submit a response to the CRÄV Ad, as set forth in step 816. The process then moves to step 615 of Figure 6.

If the answer to step 805 is "YES", and the consumers 110 have entered a CRÄV ID using the device 111, the device 111 accepts the CRÄV ID as set forth in step 810. The CRÄV ID may be a number assigned by the Promoter or the Advertiser. It may be stored in memory to eliminate the need for manual entry. Examples of how to store the CRÄV ID into memory include using a cookie over the Internet, or entering a stored number into a phone (speed dial memory function). In step 815, the broadcast network 105 or device 111 communicates the first question of the CRÄV Ad query 1820 and the answer choices. The question can be an immersion verification question, a polling question, a trivia question, or any other type of question. The answer choices may be a set of predetermined response options a, b, c, d, etc., or the consumers 110 may be required to enter the answer itself. The options for answering may include the broadcast of unique numbers or letters that may differ between broadcasters, that allow subsequent decoding by the data storage center 195 to determine the broadcast medium or location used by the consumers 110 to view the CRÄV Ad. In step 820, the consumers 110 enter their answer into the device 111. In step 825, the Promoters may communicate another question as part of the same query 1820 using the broadcast network 105 or device 111. This question may be another immersion verification question, or a question used to get information about the consumers 110. This information may include demographic information or other information. If the Promoter chooses "YES" to decision step 825, the process moves to step 830, and the device 111 communicates the new question. In step 835, the consumer enters the answer into the device 111. The process then moves back to step 825

and is repeated. If the answer to step 825 is "NO", and no other questions will be asked, the process moves to step 826. In step 826, it is determined whether or not the consumer 110 entered a CRAV ID in step 805. If the answer to step 826 is "YES", the process moves to step 615 of Figure 6. If the answer to step 826 is "NO", the process moves to step 827, where consumers 110 have the option to register. If the answer to step 827 is "YES", and the consumers 110 register, the process moves to step 615 of Figure 6. If the answer is "NO", and the consumers 110 don't register, or don't completely register, the process moves to step 828 and the responses are discarded. The process then moves to step 615 of Figure 6.

#### **CRAV Ad answers are Gathered**

Figures 9A and 9B, together comprising Figure 9, are picture diagrams illustrating an exemplary nationwide network for gathering the registration and response information, as set forth in step 220 of Figure 2. The query 1820 gathering network is designed to accommodate two variables in any data collection activity. First, expected traffic and geographic/time zone requirements must be met. Second, the registration and the response information must be sent to the data storage center 195. Figure 9A illustrates the United States map, and shows how conventional Phones 145 forward the registration and the response information to the Phone Company SP 170. Figure 9B illustrates the United States map, and shows how the Internet computer 130 forwards the registration and the response information to the Internet SP 185. Although the Figures illustrate the United States, one experienced in the art will recognize that the collection system may be implemented in any country, or in multiple countries.

Turning now to Figure 9A, a network is illustrated showing how consumer responses are forwarded by the Phone 145 to the Phone Company SP 170. Those experienced in the art will recognize the multiple ways to meet expected traffic and geographic/time zone requirements. Similar to traffic terminology, the traveling information is called "traffic", the length between two points is "distance", and impeded traffic is "congestion." In an exemplary embodiment, a single Web site and a single phone number would be sufficient to handle query 1820 responses. However, in most cases, multiple lines are necessary to handle the numerous response traffic.

For telecommunication lines, design elements may assist in reducing distance and avoiding congestion. For example, multiple phone numbers (connected to one or multiple information gathering systems 112) may be located in geographically centered locations. In addition, one published phone number, which incorporates a switch directing incoming calls to one or multiple information gathering systems 112, may be located in geographically centered locations, directed based on the incoming call's origin point. Figure 9A illustrates the option of the Phones 145 forwarding the registration and the response information to the Phone Company SP 170.

For responses provided over a network such as the Internet Network 130, the following design elements may assist to reduce distance and avoid congestion: mirrored Web sites with unique Web site addresses (each serving as a information gathering system 112) located in geographically centered locations; one published Web site address, which is redirected to one or more mirrored Web sites ideally located in geographically centered locations near the user's SP 112; and unique Web sites hosted by individual Internet SPs 185 or approved information gathering systems 112. Figure 9B illustrates the option of the Internet computer 160 forwarding the registration and the response information to the Internet SP 185.

Figure 10 shows how the information gathering system 112 sends the registration and the response information to the data storage center 195. The registration and the response information is sent to the information gathering systems 112 that may be hosted by a SP network. A CRÄV Web site may also be set up to be the information gathering system 112. This CRÄV Web site may be housed at the same location as the data storage center 195. Once the CRÄV Ad has concluded, the information gathering system 112 forwards the registration and the response information to the data storage center 195 on a time scheduled, synchronized basis. Once the consumers' 110 data is received and verified by the data storage center 195, the response information may be programmed for automatic erasure by the information gathering system 112. Figure 10 illustrates three information gathering systems 112 for forwarding registration and response information: an Internet SP 185, a Phone Company SP 170, and a private network SP 190.

### **CRÄV Ad Winners Selected and Prizes Distributed**

Figure 11 is a flow diagram illustrating an exemplary process describing how the Promoters select winners and distribute prizes, as set forth in step 230 of Figure 2. Turning now to Figure 11, an exemplary CRÄV Ad process 230 is initiated at the "START" step 1101. In step 1105, The data storage center 195 stores the registration information in the PDC 197 and the response information in the DCS 196. In step 1110, the Promoters or a third party service provider randomly choose winners and alternate winners from the DCS 196 database. The DCS 196 database includes a list of the consumers 110 who have correctly answered all required questions. The Promoters, the Advertisers, or a third party service provider, also contact the potential winners. (This third party service provider may also offer fulfillment services including information on consumer answers and coupons.) Based upon the process selected by the Promoters or the Advertisers, the potential winner identities and the truthfulness of the potential winners' registration and response information may be verified. If this option is used, the Promoters verify the identity by authenticating the consumers' registration and response information. The Promoters may require potential winners to verify demographic or confidential data prior to awarding the prize. The Promoters may repeat the one or more questions in the query 1820. The Promoters may elect to disqualify potential winners who fail to provide responses that match their query 1820 responses.

In step 1120, it is determined if the winners are qualified for the prizes. If the answer to step 1120 is "NO", the process moves to step 1125, and the next alternate winner is selected from the list of alternate winners. In step 1131, it is determined if the alternate winner is qualified. If the answer to step 1131 is "NO", the process moves back to step 1125 and is repeated. If the answer to step 1131 is "YES", the process then moves to step 1132.

If the answer to step 1120 is "YES", the process moves to step 1132, and the verified winner is added to the list of winners and the winner count is increased. In step 1135, it is determined if all winners are qualified. If the answer to step 1135 is "NO", the process moves to step 1110 and is repeated. If the answer to step 1135 is "YES", the process moves to step 1140. In step 1140, the winner information and other opted information (i.e., demographically pertinent data and query 1820 response results) may be forwarded to Advertisers and/or other interested entities, particularly if consumers 110

have approved the forwarding of said information. The Promoters, the Advertisers, or a third party service provider also announce the winners. In step 1145, the Promoters, the Advertisers, or third party service provider forwards the prizes to the winners. The process then ends at step 1199.

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### **Other Applications for CRÄV Ads**

While the above description is ideally suited for visual mass media technology such as the TV and the Internet 130, it may also be utilized in alternate mass media channels, using audio-only technology like radio, or visual-only broadcast mediums, such as a magazine or newspaper ad. The CRÄV Ads may be answered with complicated, highly-developed computer devices 111, or simply by using the Phone 145. Those practiced in the art will recognize the above invention may be implemented with any broadcast medium and response medium. In addition, the invention is not limited to providing ads within entertainment content, but can be extended to providing other types of information. Finally, while the invention has been discussed in the context of the consumers 110, the Promoters, and the Advertisers, those experienced in the art will recognize that other entities can be used. For example, a third party service provider can be responsible for: gathering the registration and response information, screening the registration and response information to validate it, mining the registration and response information to extract pertinent data, randomly selecting the winners and alternate winners, and providing prize fulfillment and delivery verification services.

### **Example**

To better illustrate the CRÄV Ad process, a representative example is provided. The Promoter is ABS Broadcasting Company ("ABS") and the Advertiser is ACME Motors ("ACME"). The consumers 110 are a four person family in Largo, Florida. Mr. Daly is 60 years old and Mrs. Daly is 58. Two sons live at home. Mike is 25, Mark is 23.

Figure 12 is a flow diagram illustrating a CRÄV Ad example. An exemplary process is initiated in step 1201. In step 1205, ABS sells two two-minute CRÄV Ad slots to ACME Motors ("ACME"). In step 1210, ABS and ACME advertise the future broadcast of CRÄV Ads, and as a result, the Dalys register. In step 1215, the CRÄV Ads are broadcast. In step 1220, the CRÄV AD responses are gathered. In step 1225, the DCS

is utilized to use the gathered information for purposes other than awarding prizes. In step 1226, the DCS mines, extracts, edits and forwards the non-prize winner related information. In step 1230, the DCS is utilized to select the winners and distributes the prizes.

5 Figure 13 is a flow diagram illustrating how the Ad slots are sold, as set forth in step 1205 of Figure 12. Turning now to Figure 13, ABS decides to sell the two CRÄV Ads for \$1,700,000 each and the twenty-four regular ads for \$375,000 each, as set forth in step 1305. ABS sells the two CRÄV Ads to ACME, and the twenty-four regular ads to other Advertisers, as set forth in step 1310. The process then moves to step 1210 of Figure  
10 12.

To determine the ad price, ABS follows the chart set forth in Figure 14. ABS determines the average profit for a show "Lawyers in Love". "Lawyers in Love" is shown at 8 PM EST/8 PM MST (broadcast over delayed time slots) and has a length of 60 minutes. The show's average viewing audience is 7 million consumers 110. ABS has  
15 allocated 16 advertising minutes (32 30-second spots) for the show. ABS charges \$300,000 per 30-second spot to Advertisers, earning \$9.6 million revenue per show. The show expenses are \$8,000,000. Thus, the average profit is show revenue (\$9.6 million) - show expenses (\$8 million) = net profit (\$1.6 million). The average cost to the Advertiser per 1000 consumers 110 is \$42.86, without taking the CRÄV Ads into account.

20 ABS then determines the substitution analysis. The two CRÄV Ads priced at \$1,700,000 replace (8) 30-second ad slots, for which ABS had formerly garnered \$2.4 million in revenue. ABS also wishes to allocate \$1 million for prizes, bringing the CRÄV Ad price to \$3.4 million. The CRÄV data gathering cost is \$510,000. ABS pays this fee to TPR, a third party information warehousing and collection organization equipped with  
25 CRÄV related registration and information gathering system 112. TPR will also select winners and alternates, authenticate winner responses, provide a list to ABS and ACME, and will handle the prize distribution process. ABS spends \$400,000 promoting the future CRÄV Ads.

30 ABS estimates the CRÄV Ad contest will increase the audience by 30%. ABS therefore increases the traditional ad price by 25%. The new ad price is \$375,000 for each 30-second slot. The Advertisers are therefore paying \$375,000 per 30-second regular ad (as opposed to \$300,000), but are in exchange potentially achieving higher immersion

levels, and their regular ads are being broadcast to a larger audience at a lower cost per impression. The new cost per 1000 consumers 110 is lower: \$42.21.

This \$75,000 increase per slot, over 24 slots, adds \$1.8 million in additional revenues to ABS. This is offset by the \$400,000 additional cost to promote the upcoming  
5 CRÄV Ads, plus \$510,000 for CRÄV information collection, compilation and winner selection/verification. Thus, ABS realizes \$890,000 in additional net profit. This increases the show's profitability by over 55%.

Figure 15 is a picture flow diagram illustrating an exemplary CRÄV Ad process for ABS and ACME to promote future CRÄV Ads, as set forth in step 1210 of Figure 12.

10 In step 1501, the process 1210 is initiated at the "START" button 1501. In step 1505, ABS and ACME elect to promote and give advanced notice of the CRÄV Ads. In step 1510, ABS chooses to promote the CRÄV Ads on TV, the Internet 130, e-mail, and TV guide, and ACME chooses to promote the CRÄV Ads on the Internet 130, e-mail, and cable TV. As set forth in step 1515, during the weeks before the broadcast, ABS promotes  
15 the upcoming "CRÄV/ACME New Car Giveaway" promotion on its own ABS network. ABS also purchases TV guide magazine ads, posts information on the ABS Web site, and sends out information to its e-mail lists. Also promoting the CRÄV Ads are ACME's own banners on its Web site and e-mail notification to its 3.5 million subscribers. ACME also advertises on the HiTechTV cable channel network. Mr. Daly sees the CRÄV Ads  
20 promoted on ABS. Mrs. Daly sees the CRÄV Ads promoted on ACME's Web site while surfing the Internet 130. Mike sees the CRÄV Ads promoted on HiTechTV cable. Mark does not see the CRÄV Ads promoted. The CRÄV Ad promotion states: "Watch 'Lawyers in Love' on Sunday at 8:00 EST and you may win 1 of 50 new ACME convertibles. Register at [www.CRÄV.tv](http://www.CRÄV.tv) or by calling 1-800-CRÄVNOW." All broadcast  
25 promotions for the future ACME CRÄV Ads include this registration information. Registration is conducted by TPR.

Following step 1520, Mr. Daly and Mrs. Daly choose to register. Mike chooses not to register at this time. Mark does not know he may register, and therefore does not register. As set forth in step 1525, Mr. Daly registers using the Phone 145, and Mrs. Daly  
30 registers using the Internet computer 160. The process then moves forward to step 1215.

The registration process involves having Mr. Daly and Mrs. Daly enter registration information. Figure 16 shows a sample CRÄV record, which may include a name, Social

Security number, phone number, PIN, birthday, e-mail, address, and any wins. The Promoters may also ask the consumers 110 to enter demographic information, which may include sex, zip code, number of children, marital status, race, weight, height, occupation, annual earnings, education, political affiliation, and religious affiliation. This information may be supplemented and updated with information including: the number of TVs and computers owned, the number of vehicles owned, and the favorite TV network. The historical response information provides information on the responses the consumers 110 have given to prior CRÄV Ads.

While the consumers 110 may enter demographic information during the registration process, the query 1820 also provides an opportunity to gather demographic information. This information may be added to the CRÄV demographic information, or may be added to the historical response data. In this case, a Level II demographic record may be incorporated into the record, for easier search and compilation in the future. Level II demographic information is collected after the initial registration point and thus may contain information for some, but not all, consumers 110. As a result, Level II demographic information may limit the total survey population, as opposed to the primary Level I demographic information, which is provided by all registrants at initial registration.

Figure 17 is a flow chart illustrating an exemplary embodiment of step 1215, where ABS broadcasts the alert 1805, the vignette 1810, and the query 1820. Turning now to Figure 17, the process 1215 is initiated at the "START" step 1701. In step 1705, ACME elects to utilize the MultiSimulcast concept, by offering simultaneous ACME CRÄV Ad broadcasts over multiple devices. ACME chooses to show the ACME CRÄV Ad on ABS, ACME's Web site, HiTechTV Cable, and the R-BAR Network simultaneously at 8:33 PM EST on Sunday. Therefore, identical ACME CRÄV Ads are MultiSimulcast on these mediums at 8:33 PM EST. Mr. Daly sees the ACME CRÄV Ad while watching "Lawyers in Love" on ABS 120. Mrs. Daly sees the ACME CRÄV Ad while logged on to the Internet 130. (Mrs. Daly already provided her CRÄV ID when she logged on.) Mike is watching HiTechTV Cable 135 in his room, and sees the ACME CRÄV Ad. Mark sees the ACME CRÄV Ad at a local bar, using the R-Bar Network 125. In step 1710, the consumers 110 answer. Mr. Daly answers using the Phone 145. Mrs. Daly answers using the Internet computer 160. Mike answers using his Palm Pilot PDA

150, although Mike has not yet registered. Mark answers using the R-Bar device 165. The answer 1830 to the query 1820 is shown only on ABS, as set forth in step 1715-1720. The answer 1830 is not shown on the Internet 130, the HiTechTV Cable 135, and the R-Bar Network 125.

5           Figure 18 illustrates the CRĀV Ad the consumers 110 see, as set forth in Figure 17. In step 1805, the alert 1805 is pictured. The alert 1805 states: "Memorizing the following ACME CAR COMPANY CRĀV Ad may make you a winner of 1 of 50 new ACME convertibles." This alert 1805 is shown for 10 seconds. In step 1810, the vignette 1810 is broadcast. The vignette 1810 is a 60-second entertaining and informative ad  
10           suitable for broadcast in non-CRĀV Ads as well. In step 1820, the query 1820 is broadcast. The query 1820 includes three questions: an immersion verification question 1820a broadcast over broadcast network 105, including ABS, ACME's web site, HiTechTV, and R-BAR private broadcast network; and an Advertiser question 1820b, and polling question 1820c, both of which are distributed via devices 111, including a  
15           telephone network, ACME's Web Site, R-Bar private Network, and Palm Pilot PDA Network. The immersion verification question 1820a asks "What new ACME model features side impact air bags?" The multiple choice responses are displayed or vocalized: 1) SD2020, 2) XP2030, 3) XX2040, 4) XYZ123. The second question, the Advertiser question 1820b, is communicated. This is a question designed by the Advertiser, posed to  
20           the consumers 110 while responding through the various devices 111. This question asks "When do you plan on buying a new car?" The multiple choice responses are displayed or vocalized: 1) 2 years or over, 2) within 2 years, 3) within 1 year, 4) within 6 months. In step 1820c, the third question, the polling question 1820c, is displayed or vocalized. This question is designed for a contracted pollster, posed to the consumers 110 while  
25           responding through the various devices 111. This question asks "Assuming the following choices, for whom do you plan to vote for U.S. President in 2008?" The multiple choice responses are displayed or vocalized: 1) Hillary Clinton, 2) Colin Powell 3) Jeb Bush 4) Frank Maggio. In step 1830, the correct answer to question 1 is displayed or vocalized: XP2030.

30           Figure 19 is a flow diagram illustrating how the CRĀV Ads are answered by the Dalys, as set forth in step 1710 of Figure 17. For Mr. Daly, the process is as follows. Mr. Daly answers using the Phone 145, by dialing a phone number he was given when he

registered. The phone number connects to an answering service, which asks Mr. Daly for his CRÄV ID, as set forth in step 1902. Mr. Daly has already registered, so he enters his CRÄV ID and it is accepted in step 1910. In step 1930, the Phone 145 plays Mr. Daly the first question 1820a with answer choices. In step 1935, he answers "SD2020" by pressing 5 1 on his touch-tone Phone 145, as prompted. (This is not the correct response.) Another question is asked, so the process moves from step 1940 to step 1945. In step 1945, Mr. Daly is asked the second question 1820b with answer choices. In step 1950, Mr. Daly answers "2 years and over" by pressing 1 on his Phone 145. A third question 1820c is asked, so the process moves from step 1940 to step 1945. In step 1945, Mr. Daly is asked 10 the third question. In step 1950, Mr. Daly answers he will vote for "Frank Maggio" for President by pressing 4 on his Phone 145. (This is evidence of his political acumen.)

For Mrs. Daly, the process is as follows: Mrs. Daly answers using the Internet Computer 160. As Mrs. Daly already provided her CRÄV ID automatically when she logged on (steps 1902-1910), she only needs to answer the questions. In step 1930, the 15 Internet 130 shows the immersion verification question 1820a. In step 1935, Mrs. Daly selects "XP2030". In step 1945, the Internet Network 130 shows the Advertiser question 1820b with answer choices. In step 1950, Mrs. Daly selects "within 2 years". Because there is another question, the process moves from step 1940 to step 1945 again. In step 1945 the polling question 1820c with answer choices is shown. In step 1950, Mrs. Daly 20 selects "Frank Maggio" representing her choice for President. (Intelligence runs in the Daly household.)

For Mike, the process is as follows: Mike uses his Palm Pilot 150 to access the Web site shown on HiTechTV Cable 135. Mike has not registered, but registration is allowed, so the process moves from step 1905, to step 1925, where registration is allowed, 25 and then to step 1930. In step 1930, the immersion verification question 1820a with answer choices is displayed. In step 1935, Mike answers 3 ("XX2040"). There is another question so the process moves from step 1940 to 1945. In step 1945, the Advertiser question 1820b with answer choices is displayed. In step 1950, Mike answers 3 ("within 1 year"). The same process is followed for the polling question 1820c, and Mike answers it. 30 There are no additional questions, so the process moves from step 1940 to step 1926. In step 1926, because Mike does not have a CRÄV ID, the process moves to step 1927 and

Mike registers and gets a CRÄV ID, which is automatically entered. The process then moves to step 1720.

For Mark, the process is as follows: Mark uses the bar's private network, which broadcasts the CRÄV Ads and presents the query 1820 to the consumers 110 located within the bar who are connected to the private network and who have enrolled to play. Mark is asked for his CRÄV ID in step 1902. Mark has not pre-registered, so Mark types "NONE", and the process moves to step 1905, and then to 1925. In step 1925, registration is allowed during the CRÄV Ad, so the process moves to step 1930. In step 1930, the immersion verification question 1820a with answer choices is displayed. In step 1935, Mark answers 3 ("XX2040"). Another question is asked, so the process moves from step 1940 to 1945. In step 1945, the Advertiser question 1820b with answer choices is displayed. In step 1950, Mark answers 3 ("within 1 year"). Another question is asked, so the process moves from step 1940 to 1945. In step 1945, the polling question 1820c with answer choices is displayed. In step 1950, Mark answers 1 ("Hillary Clinton"). No other questions are asked, so the process moves from step 1940 to step 1926. In step 1926, the device recognizes that Mark does not have a CRÄV ID. The process moves to step 1927, and Mark is asked if he wishes to follow the registration process (to obtain a CRÄV ID) or lose his query 1820 response information. Mark starts to complete the registration information, but is distracted and logs off. Because he does not complete the registration, he is not assigned a CRÄV ID, and his responses are discarded, as set forth in step 1928.

In step 1220 of Figure 12, the CRÄV Ad answers are gathered. This is done by the Phone Company SP 170, the Internet SP 185, the PDA SP 175, and the R-Bar Private Network SP 190 forwarding the response and applicable registration information to TPR's DCS 195.

Figure 20 is a flow diagram illustrating how TPR uses the data storage center 195 to select winners and distribute the prizes, as set forth in step 1226 and 1227 of Figure 12. In step 2001, the process is initiated at the "START" button. In step 2005, TPR's data storage center 195 stores the registration information (for those who registered during game play) and the DCS 196 stores the response information for all the registered consumers 110, including Mr. Daly, Mrs. Daly, and Mike. In step 2010, the potential and alternates winners are randomly chosen and extracted from all the correct answers for question 1820a stored within the DCS 196. Mike is chosen as a one of 50 winners and

Mrs. Daly is chosen as the first of 50 alternate winners. TPR begins the verification process by contacting all 50 winners. Each winner is qualified in step 2020, and as each winner is verified their name is added to the list of verified winners in step 2035, and the winner counter is increased. Ultimately, TPR contacts Mike in step 2010 to verify his  
5 CRÄV ID, registration information, and response information in step 2020. Mike's registration information was falsified (he said he was 60 when registering, but in reality he is 25), so he is disqualified, because truthful answers are required as a condition of winning according to ABS Promotion rules. All of Mike's data is also purged from the data storage center 195 to avoid potentially false or misleading information. This is done  
10 to maintain data base integrity. According to step 2020, because Mike's information is not correct, the first alternate winner at the top of the list is chosen, as set forth in step 2025. Mrs. Daly is the first alternate winner, so her information is verified in step 2025. Because Mrs. Daly's immersion verification question was correct, and her demographic data is proven to be accurate and verified in step 2031, so she is selected as a verified winner and  
15 added to the list in step 2032.

In step 2035, once all 50 winners have been selected and verified, the process moves to step 2040, where TPR forwards to ABS the information as to the identities of all winners, including Mrs. Daly. In step 2040, ABS and ACME also jointly announce the name of all winners, including Mrs. Daly. Included in the information passed to ABS  
20 from TPR in step 2040 is a report including demographic information for all consumer responses for the ACME and pollster designed questions, which ABS may elect to pass along to ACME or to survey organizations who have contracted ABS to acquire polling statistics. This report is derived and data mined from the registration and response data. This information includes statistics indicating that of the 5.532 million female consumers  
25 110, 534,461 live in households with average incomes in excess of \$75,000 per year. This information also indicates that, of these, 6.5% live in the state of Florida and are over 50 years old, and 3.443% expect to purchase a car within the next six months, 5.2% live in the metropolitan NYC area, and .8429% expect to purchase a new car within the next six months. The statistics also indicate that across all age groups, and all occupations, Frank  
30 Maggio will be elected President in 2008 by a 59.8% share of the popular vote.

In step 2045, TPR forwards a convertible to Mrs. Daly and the other winners. The process ends in step 2099.

### **Other Applications**

While the above description is ideally suited for visual mass media broadcast technology such as the Broadcast TV 120, Cable TV 135, Satellite TV 140, Private  
5 Networks 125, Other Networks 141, and streaming Internet 130, it may also be utilized in alternate mass media channels, using audio-only technology like radio, or visual-only broadcast mediums, such as a magazine or newspaper ad. The CRÄV Ads may be answered with complicated, highly developed computer devices 111, or simply by using the Phone 145. Those practiced in the art will recognize the above invention may be  
10 implemented with any broadcast medium and response medium.

The CRÄV system and process can be utilized across any mass media broadcast network 105. For example, the mass media broadcast network 105 can comprise TV, cable, satellite, radio, outdoor media (billboards, signs, buses), print media (newspapers, magazines), direct mail, the Internet, or other broadcast network, as well as private  
15 networks. Private networks can comprise networks having connected Personal Recording devices such as a TiVo®. Additionally, a convergence of multiple mass media broadcast networks 105, when utilized together, can broaden the reach and effectiveness of CRÄV ads.

#### **Radio**

20 Radio programs are distributed over the airwaves, and/or over the Internet. As with the television industry, ad revenues garnered by radio stations are utilized to offset the costs of content (music, news, sports, etc.) and its production, as well as overhead costs such as staff and marketing. As with television, ads and ad pods are embedded between content segments. Consumers tend to avoid radio ads by switching channels,  
25 listening to alternate forms of entertainment (such as CDs, DVDs, television, etc.), or by turning off the radio.

Within radio program segments, single CRÄV ads or CRÄV ad pods can be broadcast. Some or all ads within the program may be CRÄV ads. CRÄV ads can contain “alert” tones or specific alert wording to entice immersion. The alert can be provided at  
30 the beginning of a program or program segment, or at the beginning or end of an ad or ad pod. After the ads (audio “vignettes”) are broadcast, listeners can be provided with log-in instructions. The instructions can suggest immersion verification via telephone or cellular

phone. Additionally, the instructions can suggest immersion verification through any of the response devices 111. Accordingly, consumers can register and/or provide query responses to immersion verification or other queries through the response devices 111. The Queries can be broadcast on air, before or after the CRÄV ad. Alternatively, the  
5 Queries can be provided during the query-response interaction process utilizing devices 111 over networks provided by Service Providers 112.

Promoters may desire to provide multiple queries to make cheating more difficult. For example, cheating can include one consumer learning the content and providing the query and answer to subsequent players. Promoters may also desire to limit the amount of  
10 time allowed for interaction. In addition to Immersion Verification queries, other queries can be included. For example, the other queries can comprise sponsor-designed questions, polling questions, demographic questions, etc., similarly to television use of CRÄV ads.

Aspects of the television industry's use of CRÄV ads discussed above mirror the radio industry. Those aspects comprise the advance promotion and registration of CRÄV  
15 players, the assignment of CRÄV ID numbers, research, and the substantial prizing and prize fulfillment aspects. Those practiced in the art will recognize the similarities between the radio broadcast and television broadcast industries, as well as the similarities in the methods, analysis, and sales techniques utilized by Promoters to determine the sales price and costs of CRÄV ads.

#### **Print Media: Books/Magazines/Newspapers**

Books, magazines, and newspapers are distributed to subscribers through vending or printed work sales outlets. Additionally, on-line versions of those printed materials may be distributed via the Internet. Over-air broadcast mass media (such as television and  
25 radio) have costs affiliated with time. In other words, radio and television costs of content are measured in units of time, and ad units are sold as units of time. On the other hand, print mass media content costs are affiliated with space, such as ad size on printed pages. The more printed pages, the higher the cost of a printed work.

Ad revenues garnered by print media are utilized to offset the costs of paper, printing costs, distribution, development of written and photographic content and its  
30 production, and staff and marketing overhead. Ads of different sizes can be embedded between content segments or sections of the print media. Consumers tend to avoid print

ads by ignoring the ad, reading around the ad, turning the page, or discontinuing reading the written work.

Within and between printed content segments, CRÄV ads of different sizes can be printed or distributed. The ads can comprise an alert mark or logo to entice immersion.

5 Additionally, specific printed instructions can be provided within the ad to entice immersion. Internet distribution of magazines (e-magazines or e-zines) or newspapers also can comprise audio or visual alerts. An alert logo can be provided on a printed ad to invite immersion in the content of that individual ad. Alternatively, an alert logo can be provided on multiple ads to invite immersion in the content for a section of ads or for one  
10 of the ads in the section. The multiple ads can comprise the printed version of an ad pod.

After the consumers review the print media ads, they can register and/or provide a query response through the various response devices 111. In exemplary embodiments, the Immersion verification query can be printed on the ad, hidden elsewhere within the printed publication, or provided only during the query interaction/response process through the  
15 response devices 111. Providing the query during the interaction/response process can enhance immersion by requiring memorization of the ad to assist in expeditious answering of the query.

As discussed above, Promoters may desire to provide multiple queries to make cheating more difficult. Promoters can attempt to allow a consumer to interact with an ad  
20 only once, further increasing the likelihood of serious desire to play properly and increasing the likelihood and effectiveness of immersion. To prevent subsequent reviewing of the ad, Promoters can limit the amount of time allowed for interaction, or can allow interaction and immersion verification within a limited, announced timeframe. Accordingly, the consumers can rely on memory to correctly and timely answer the query.  
25 In addition to immersion verification queries, other queries can be included. For example, other queries can comprise sponsor-designed questions, polling questions, demographic questions, etc.

Most aspects of the television industry's use of CRÄV ads discussed above mirror the mass media print industry. For example, similarities include advance promotion and  
30 registration of CRÄV players, the assignment of CRÄV ID numbers, research, and the substantial prizing and prize fulfillment aspects. Those practiced in the art will recognize the similarities between the radio and television broadcast industries, when compared to

the print industry, as well as the methods, analysis, and sales techniques utilized by Promoters to determine the sales price and costs for CRĀV ads.

### **Outdoor Media**

5 Outdoor media can comprise billboards, fixed signs on or inside buildings, and mobile signs on taxis, buses, plane banners, or blimps. Outdoor mass media advertising can rely on capturing the attention of passing consumers for short time periods. To create outdoor media, Promoters utilize printed materials such as billboard “wraps” or printed card inserts for taxis, paint applied directly to boards or buildings, and electronic  
10 billboards. Electronic billboards can display advertising messages and entertainment content, such as news headlines, sports headlines, etc. However, most outdoor media comprise advertising messages and do not comprise substantial amounts of traditional content.

Ad revenues generated by outdoor media Promoters are utilized to offset the costs  
15 of development of written and photographic content and its production, paper, printing costs, paint, distribution, installation, material costs, overhead, rental fees, or other fees charged by billboard property owners, taxi cab, or advertising facility owners. Consumers tend to avoid outdoor media ads by ignoring them, or by looking away.

A CRĀV version of an outdoor mass media ad can comprise a recognized visual  
20 “alert” mark or logo on an outdoor media ad to entice immersion. Alternatively, the outdoor media ad can comprise an audible tone to entice immersion. The audible tone can be provided over radio waves or can emanate from the outdoor media item itself. The outdoor media CRĀV ad also can provide log-in instructions, allowing interaction through the various response devices 111 for consumers to register and/or to provide query  
25 responses. The Immersion verification query can be printed on the outdoor media ad. Alternatively, the Immersion verification query can be provided during the query interaction/response process through the response devices 111.

As discussed above, Promoters may desire to provide multiple queries to make cheating more difficult. Promoters can attempt to allow a consumer to interact with an ad  
30 only once, further increasing the likelihood of serious desire to properly play and increasing the likelihood and effectiveness of immersion. To prevent subsequent reviewing of the ad, Promoters can limit the amount of time allowed for interaction, or can

allow interaction and immersion verification within a limited announced timeframe. Accordingly, the consumer can rely on memory to correctly and timely answer the query. In addition to immersion verification queries, other queries can be included. For example, other queries can comprise sponsor-designed questions, polling questions, demographic questions, etc.

Aspects of the television industry's use of CRÄV ads discussed above mirror the outdoor media industry. For example, those aspects comprise the advance promotion and registration of CRÄV players (a billboard Promoter could advise passerby's of "WATCH THIS SPACE FOR FUTURE CRÄV ADS"), the assignment of CRÄV ID numbers for registered players, research aspects of registration and query responses, and the substantial prizing and prize fulfillment aspects. Those practiced in the art will recognize the similarities between the radio and television broadcast industries, when compared to the outdoor media, as well as the methods, analysis, and sales techniques utilized by Promoters to determine the sales price and costs for CRÄV outdoor ads.

#### **Direct Mail**

Direct mail relies on capturing the attention of consumers while opening their mail. Many Direct Mail Promoters utilize printed materials (envelopes, printed advertising fliers, brochures, coupons, etc.) and incur substantial costs in distributing their advertising. Most direct mail media, like outdoor media, do not comprise substantial amounts of traditional content and are typically dominated by advertising messages. However, in some respects, direct mail Promoters face many of the cost structures of the print media industries because costs are determined by space rather than broadcast time.

Direct mail Promoters can mail one advertising insert, or multiple ad inserts, to a mass mailing list, taking advantage of economies of scale such as bulk mail rates. In the event of multiple mailed pieces within one envelope (the direct mail version of an ad "pod"), costs of distribution are shared by multiple advertisers, lowering the costs per insert. Ad revenues garnered by direct mail media Promoters are utilized to offset the costs of paper, printing costs, distribution and postage, handling, overhead, and development of written and photographic content and its production. Consumers tend to avoid direct mail media ads by discarding them while sorting incoming mail, often before even opening the envelopes.

A CRÄV version of a direct mail ad can comprise a recognized visual alert mark or logo on the envelope or on the insert itself. An alert logo can be added to a single printed insert to invite immersion in that individual CRÄV ad. Alternatively, an alert can apply and invite immersion for all inserts in the event of multiple inserts (a direct mail ad pod.)

5 The CRÄV envelope or CRÄV ad can provide printed log-in instructions, allowing interaction facilitated through the various response devices 111. Accordingly, consumers can register and/or provide query responses through the response devices 111. The Immersion verification query also can be printed on the envelope or insert. Alternatively, the query can be provided during the query response/interaction process.

10 As discussed above, Promoters may desire to provide multiple queries to make cheating more difficult. Promoters can attempt to allow a consumer to interact with an ad only once, further increasing the likelihood of serious desire to play properly and increasing the likelihood and effectiveness of immersion. To prevent subsequent reviewing of the ad, Promoters can limit the amount of time allowed for interaction, or can  
15 allow interaction and immersion verification within a limited announced timeframe. Accordingly, the consumer can rely on memory to correctly and timely answer the query. In addition to immersion verification queries, other queries can be included. For example, other queries can comprise sponsor-designed questions, polling questions, demographic questions, etc.

20 Aspects of the television industry's use of CRÄV ads discussed above mirror the direct mail media industry. Those aspects comprise the advance promotion and registration of CRÄV players (initial mailings can advise recipients of future mailings bearing the CRÄV logo or pre-registration), the assignment of CRÄV ID numbers for registered players, research aspects of registration and query responses, and the substantial  
25 prizing and prize fulfillment aspects. Those practiced in the art will recognize the similarities between the radio and television broadcast industries, when compared to the direct mail media industry, as well as the methods, analysis, and sales techniques utilized by Promoters to determine the sales price and costs for direct mail CRÄV ads.

### 30 Internet

Mass distribution of CRÄV ads over the Internet can take multiple forms, each of which can share aspects of other mass media types. In addition, the Internet can save

Promoters certain costs affiliated with less modern forms of mass media. For example, Internet Promoters can create "broadcast e-mail ads." In such ads, a Promoter can mass broadcast e-mails to a list of e-mail addresses, simulating a direct mail campaign without bearing the costs of materials and postage.

5 Internet Promoters also can "stream" video versions of televised or radio content and embedded ads, or merely the ads themselves, to consumers. In "requested streamed Internet ads," the Promoters can stream the content to consumers upon request. Alternatively, in "simulcast broadcast ads," the Promoters can stream simulcast versions of televised or radio content and embedded ads, which are mass broadcast over a web site. 10 In the example of streaming audio or video feeds, Promoters bear bandwidth costs, which must be considered when calculating the cost to the Advertiser for sending streaming ads, or streaming CRÄV ads, to consumers.

Some distributors of printed materials offer "Internet mirrored display ads." For example, newspaper distributors can offer on-line versions of their printed works on a 15 website. Internet consumers of the printed work can review content and ads in the newspaper on the website. Those Internet mirrored display ads are similar to the printed media ads discussed above.

Internet Promoters also use "mass media banner ads" as a means of Internet advertising. A Promoter can create a CRÄV mass media banner ad by consistently 20 posting the ad on a mass media website in a non-targeted fashion without linking the advertiser directly to the consumer. The CRÄV banner ad can comprise an alert and can provide substantial rewards to some of the consumers who register and verify immersion in the ad's content. Those CRÄV ads are different from the types of targeted Internet ads displayed only to consumers that meet specified criteria.

25 consumers tend to avoid Internet ads by closing browser windows containing ads, or avoiding web sites that comprise ads altogether. However, Internet CRÄV ads can overcome the consumers' tendencies by drawing the consumers' attention to the ads. Each of the Internet ads discussed above can comprise a CRÄV ad by implementing the alert and Immersion Verification processes for the ad itself. Multiple CRÄV ads within a 30 requested stream, simulcast broadcast, mirrored display, or mass media banner broadcast can comprise a "pod" of ads, whereby an Immersion verification query can be posed about

one or more of the ads in the pod. The CRĀV ads can comprise alert logos or tones, or specific alert wording to entice immersion.

After the ads are broadcast by stream, display, or banner with video and/or audio vignettes, consumers can be provided with log-in instructions, typically suggesting log-in for immersion verification via the Internet, but also available through the other response devices 111. Accordingly, consumers can register and/or provide query responses to immersion verification queries using the response devices 111. Queries also can be broadcast following the vignette or before or after the CRĀV ad. Alternatively, the Queries can be provided during the query response/interaction process utilizing the response devices 111 over networks provided by Service Providers 112.

As discussed above, Promoters may desire to provide multiple queries to make cheating more difficult. Promoters can attempt to allow a consumer to interact with an ad only once, further increasing the likelihood of serious desire to play properly and increasing the likelihood and effectiveness of immersion. To prevent subsequent reviewing of the ad, Promoters can limit the amount of time allowed for interaction, or can allow interaction and immersion verification within a limited, announced timeframe. Accordingly, the consumer can rely on memory to correctly and timely answer the query. In addition to immersion verification queries, other queries can be included. For example, other queries can comprise sponsor-designed questions, polling questions, demographic questions, etc.

Aspects of the television industry's use of CRĀV ads discussed above mirror CRĀV ads over the Internet. Those aspects comprise the advance promotion and registration of CRĀV players, the assignment of CRĀV ID numbers, research, and the substantial prizing and prize fulfillment aspects. Those practiced in the art will recognize the similarities between the Internet and television broadcast industries, as well as the methods, analysis, and sales techniques utilized by Promoters to determine the sales price and costs for CRĀV ads.

### **Private Networks**

Private networks can exist across all mass media industries. For example, private networks comprise a mailing list (distribution of materials over the U.S. Postal Service delivery network), magazine subscription list, e-mail address distribution list, taped music

distributed to subscribers (like Muzak), a connected network of broadcast content linked to interactive devices within bars and restaurants (such as NTN), consumers connected through a cable system to Video on Demand servers, and owners on a Personal Video Recorder network.

5 For mass media broadcasting of CRÄV ads over a private network, the private network requires the ability to cost effectively distribute (i.e., broadcast) ads across the entire network. That broadcasting differs from targeted media, which include distributing interactive ads to a segment of consumers connected to the private network based on targeted profiles, such as demographics.

10 In general, ads distributed over a private network are subject to the same consumer avoidance techniques indicative of the industry (i.e., print ads can be avoided by turning the page). Similarly, the implementation of CRÄV ads across a private network will enhance immersion, just as it would across the public network version of the same CRÄV ads.

### 15 Convergence

To enhance the effectiveness of CRÄV ads, the CRÄV ads can be broadcast across a convergence of multiple media forms ("cross-media" broadcasting). For example, a Promoter can distribute CRÄV ads comprising the same message about a new automobile  
20 across the radio, television, Internet, and print mediums. The ads can be presented simultaneously or at different times on the multiple media forms. While the ads can have different appearances based upon restrictions of each media, the immersion verification query can be the same across all media.

Figure 21 illustrates a CRÄV ad broadcast over a convergence.2100 of mass media  
25 formats according to an exemplary embodiment of the present invention. As shown, a Promoter can broadcast to consumers 110 a CRÄV ad or ad pod over two or more of the broadcast networks 105. The CRÄV ad or ad pod can be broadcast simultaneously or independently over the multiple broadcast networks 105. The consumers 110 can react to the CRÄV ad or ad pod by responding to an immersion verification query about a selected  
30 content portion of a CRÄV ad or pod. The consumers 110 can respond to the query through one or more of the response devices 111. The query can be provided over one or more of the multiple broadcast networks 105. Alternatively, the query can be provided

over the response devices 111. The response devices 111 communicate the consumers' query responses to the data storage center 195 through the respective Service Provides 112. A reward can be granted to a consumer that responds correctly to the query.

In an exemplary embodiment, a Promoter or advertiser can bundle CRÄV ads across all media, and the interaction process also can be triggered by each media individually or through instructions provided in one of the media (for example, television). In an exemplary embodiment, one media can provide "clues" to assist CRÄV players in correctly answering CRÄV ads in another media. For example, a local newspaper might publish an ad with a CRÄV logo. The ad can explain that a televised CRÄV ad sponsored by the same advertiser will be broadcast within a CRÄV ad pod during a certain timeframe that evening, over a specified television network. In an exemplary embodiment, immersion verification can be available only after the televised CRÄV ad airs. The query can be broadcast on air, provided in the original ad, or provided during the response/interaction process. Accordingly, the CRÄV logo on the print ad can provide the future televised CRÄV ad viewer with a clue as to which ad in the indicated CRÄV pod is the ad for which the immersion query applies. This convergence methodology can be implemented over the radio, or in unison with radio, print, television, well-timed direct mail, private networks, or other broadcast media. Additionally, such a "detached" CRÄV ad can be distributed in various parts over various mass media formats.

Another exemplary form of convergence is the utilization of the bandwidth provided over a high definition signal. This bandwidth can be divided into multiple signals, which can include data, Internet, radio, and televised content. Multiple-channel use of this bandwidth can provide delivery of normal or high definition televised or radio CRÄV ads, while also providing Internet content that might include Immersion Verification Queries. Similarly, the Internet signal might include CRÄV ads (stream, display, or banner with video and/or audio vignettes). As indicated above, those Internet CRÄV ads can utilize the same Immersion Verification Queries as other cross-media CRÄV ads in the marketplace. Additionally, the multiple media formats can provide clues to viewers of televised CRÄV ads as to which ad or ads in a scheduled televised pod will be subject to immersion verification.

Another exemplary form of convergence comprises "back channel" technology, which provides a data feed from television set top boxes or private video recorders

("PVRs"). The set top boxes and PVRs receive broadcast content signal over a satellite or cable network and display the signal on a monitor. The monitor can comprise a TV. Consumers can access the back channel of the set top boxes or PVRs to send data from the set top boxes or PVRs to a third party. This back channel signal can be delivered by a second signal source. The second signal source can comprise broadband or dial-up Internet access, telephone, cable, or satellite. The back channel signal also can provide two-way communication. Accordingly, immersion verification, registration, and response/interaction can be performed utilizing the back channel capabilities of the set top boxes or PVRs.

For set top boxes and PVRs, CRÄV ads (or elements of CRÄV ads) can be delivered to the consumer via a convergence of mass media formats. For example, the alert and vignette can be delivered via television broadcast, while the immersion verification query and interaction elements can be delivered via Internet.

In an exemplary embodiment, while watching a CRÄV ad, the consumer can press a button on the set top box, PVR, or the remote control, which opens a second CRÄV ad. The second CRÄV ad can comprise a display ad or even full motion video and can provide some or all of the elements of the on-air CRÄV ad. That exemplary embodiment can expose the consumer to a second branded CRÄV advertisement.

Those skilled in the art will recognize that the present invention applies to any mass media broadcast network and that new types of delivery technologies can serve as new mass media platforms for the delivery of content and ads, including CRÄV ads. Those future media will form part of the CRÄV ad delivery and interaction system and will be able to participate in the cross-media convergence methodologies discussed above.

#### **Interactive Remote Query Response Device**

Figure 22 is a block diagram depicting a system 2200 for remotely interacting with broadcast content according to an exemplary embodiment of the present invention. As shown in Figure 22, the broadcast network 105 broadcasts content 2203 to a broadcast receiver 2205. In an exemplary embodiment, the broadcast network 105 comprises a broadcast television network 120, and the broadcast receiver 2205 comprises a television of a recipient (consumer 110). In an alternative exemplary embodiment, the broadcast network 105 comprises a cable network 135, and the broadcast receiver 2205 comprises

either a television receiving the cable input directly or a cable tuner set-top box that receives the cable input and presents the broadcast content 2203 on a television. In another alternative exemplary embodiment, the broadcast network 105 comprises a satellite network 140, and the broadcast receiver 2205 comprises a satellite receiver that receives the broadcast content 2203 and presents the broadcast content 2203 on a television. In other exemplary embodiments, the broadcast network 105 can comprise a broadcast radio network, and the broadcast receiver 2205 can comprise a radio receiver; or the broadcast network 105 can comprise a server communicating streaming audio or video, and the broadcast receiver 2205 can comprise a personal computer connected to the server via a distributed computer network, such as the Internet. Other broadcast networks and receivers are within the scope of the present invention.

A server computer 2230 communicates a query to a client computer 2220 via a distributed computer network. The query comprises a question about a selected portion of the broadcast content 2203. As shown in Figure 22, the network can comprise the Internet 2225. In exemplary embodiments, the client computer 2220 can comprise a personal computer, a laptop computer, or a personal digital assistant (PDA). In other exemplary embodiments, the client computer 2220 can comprise a cable or satellite set-top box, a video cassette recorder, or a personal video recorder (PVR). In those embodiments, the client computer 2220 also can comprise the broadcast receiver 2205.

The client computer 2220 communicates the query to a client transmitter/receiver 2215. The client transmitter/receiver 2215 transmits an interactive communication signal 2217 to an interactive remote control 2210, which comprises the interactive remote query response device. The interactive communication signal 2217 can comprise the query received from the server computer 2230. Additionally, the interactive communication signal 2217 can comprise a synchronization signal 2204 (discussed below) or other information.

In an exemplary embodiment, the client transmitter/receiver 2215 can be an integral component of the client computer 2220. In an alternative exemplary embodiment, the client transmitter/receiver 2215 can comprise a separate component coupled to the client computer 2220. The client transmitter/receiver 2215 can comprise a single component performing both transmitting and receiving functions. Alternatively, the client transmitter/receiver 2215 can comprise separate components that perform the respective

transmitting and receiving functions. For example, for a PC-based implementation, the client computer 2220 can be coupled to the client transmitter/receiver 2215 via the client computer's 2220 USB, serial, or other ports, via a card installed in a card slot, or via an Ethernet coupled to the client computer 2220. Throughout this specification, reference to  
5 a "client transmitter/receiver" 2215 refers to any of those exemplary embodiments discussed above.

The interactive remote control 2210 receives the interactive communication signal 2217 and presents the query to a recipient operating the interactive remote control 2210. The interactive remote control 2210 will be described with reference to Figures 22 and 23.  
10 Figure 23 is block diagram depicting the interactive remote control 2210 according to an exemplary embodiment of the present invention.

Using the interactive remote control 2210, a recipient of the broadcast content 2203 can tune the broadcast receiver 2205 to the station channel upon which the broadcast content 2203 will be presented. In an exemplary embodiment, the recipient can  
15 input the station channel to a processor 2304 of the remote control 2210 via an input device, such as a channel control keypad 2310. The processor 2304 generates a channel control signal 2212 comprising instructions to tune the broadcast receiver 2205 to the station channel. Then, a channel control transmitter 2312 transmits the channel control signal 2212 to the broadcast receiver 2205, thereby tuning the broadcast receiver 2205 to  
20 the station channel.

The channel control keypad 2310 can allow the interactive remote control 2210 to perform remote control functions for a television or other multi-media devices. The multi-media devices can comprise cable boxes, digital satellite set-top boxes, PVR controls, and audio receiver and amplifier controls. The interactive remote control 2210 can comprise a  
25 "Universal Remote," with numerous device control codes stored within a memory (not shown) during the manufacturing process. Additionally, the interactive remote control 2210 can learn the remote control functions, utilizing conventional technology used in "learning remotes." The interactive remote control 2210 also can download remote control codes from the Internet for storage in the memory, thereby allowing the recipients  
30 to easily update the codes as new hardware is added to the home.

An interactive transmitter/receiver 2302 receives the interactive communication signal 2217 transmitted from the client transmitter/receiver 2215 and communicates the

interactive communication signal 2217 to the processor 2304. The processor 2304 parses the query from the interactive communication signal 2217 and presents the query on a display 2306. In exemplary embodiments, the display 2306 comprises an LED or LCD display, with or without backlighting. Alternatively, the display 2306 can comprise a full color visual active matrix display of the design and specifications of those utilized with PDAs and laptop computers. The size and power requirements of the display affect the power requirements, battery specifications, and expected battery life of the interactive remote control 2210.

The client transmitter/receiver 2215 can interact with multiple interactive remote controls 2210 within a single location by referencing a unique media access control ("MAC") address for the respective interactive remote control 2210. In that exemplary embodiment, the client computer 2220 can recognize the MAC address to determine which interactive remote control 2210, and indirectly which recipient, is interacting. Additionally, the client transmitter/receiver 2215 can transmit generic interactive communication signals 2212 that can be received by any interactive remote control 2210 within range.

Transmissions between the client transmitter/receiver 2215 and the interactive transmitter/receiver 2302 can comprise signals using the same or different format as that used by the channel control transmitter 2312. For example, radio frequency (RF), infrared (IR), ultra wide band (UWB), or other methods can be used to transmit the interactive communication signal 2217 and the channel control signal 2212.

The recipient operating the interactive remote control 2210 can respond to the query directly through the interactive remote control 2210. The recipient can input a response to the processor 2304 via an input device, such as an interactive response keypad 2308. In an exemplary embodiment, the interactive response keypad 2308 comprises a complete alpha/numeric keyboard-type keypad. In an alternative exemplary embodiment, the interactive response keypad 2308 comprises multiple choice response buttons. In that embodiment, the recipient can input a response to a multiple choice question by selecting the corresponding multiple choice button. Thus, the interactive response keypad 2308 can comprise simple keys for multiple choice responses and can be extended to include a full "QWERTY" keyboard with numerals, symbols, and fully functional arrow keys and special function keys customized for the interactive response process. In another

exemplary embodiment, the interactive response keypad 2308 can comprise “soft buttons” corresponding to adjacent information presented on the display 2306. Those soft buttons can provide one-touch entry by the recipient of pre-programmed or on-screen interactive responses (such as multiple choice letters or selections), or to store pre programmed  
5 macros relative to the interaction (i.e., identification numbers that allow multiple users to log into and utilize the interactive remote control 2210). In other exemplary embodiments, the input device for inputting the response to the query can comprise a touch screen, a pressure sensitive screen operated by a stylus, a joystick, or other suitable device for inputting the query response into the interactive remote control 2210.

10 In an exemplary embodiment, the interactive response keypad 2308 and the channel control keypad 2310 can comprise separate components of the interactive remote control 2210. In an alternative exemplary embodiment, the interactive response keypad 2308 and the channel control keypad 2310 can comprise a single component of the interactive remote control 2210. In that case, the interactive remote control 2210 can  
15 comprise a selector button (not shown) to switch between an interactive response function and a channel control function.

The interactive transmitter/receiver 2302 transmits the response input by the recipient to the client transmitter/receiver 2215 via an interactive communication signal 2217. In an exemplary embodiment, the interactive transmitter/receiver 2302 comprises a  
20 single component performing both transmitting and receiving functions. In an alternative exemplary embodiment, the interactive transmitter/receiver 2302 comprises separate components that perform the respective transmitting and receiving functions. Throughout this specification, reference to an “interactive transmitter/receiver” 2302 refers to either of those exemplary embodiments.

25 The client transmitter/receiver 2215 communicates the recipient’s response received from the interactive transmitter/receiver 2302 to the client computer 2220. The client computer 2220 communicates the recipient’s response to the server computer 2230 via the Internet 2225. The server computer 2230 communicates the recipient’s response to the data storage center 195.

30 The data storage center 195 determines whether the recipient’s response comprises a correct reply to the query. Then, the data storage center 195 awards a prize to a recipient that submits a response comprising a correct reply to the query. Each response comprising

a correct reply to the query can indicate that the recipient providing the response was exposed to at least the selected portion of the broadcast content 2203 addressed in the query. In an alternative exemplary embodiment, the server computer 2230 can comprise the data storage center 195 and can perform the functions of the data storage center 195.

5           Presentation of the query on the interactive remote control 2210 can be synchronized with presentation of the broadcast content 2203 on the broadcast receiver 2205. The broadcast network 105 can communicate a synchronization signal 2204 to the server computer 2230. The synchronization signal 2204 can comprise information indicating the broadcasting time at which the broadcast network 105 will  
10 broadcast the broadcast content 2203. The synchronization signal 2204 also can comprise the station channel upon which the broadcast content 2203 will be presented.

In an exemplary embodiment, the server computer 2230 can communicate the query to the client computer 2220 based on the broadcasting time in the synchronization signal 2204. Accordingly, the server computer 2230 can control the time at which the  
15 interactive remote control 2210 presents the query by controlling the time at which the server computer 2230 communicates the query to the client computer 2220.

In an alternative exemplary embodiment, the server computer 2230 can communicate the synchronization signal to the client computer 2220 via the Internet 2225. Then, the client computer 2220 can transmit the query to the interactive remote control  
20 2210 via the client transmitter/receiver 2215 based on the broadcast time in the synchronization signal 2204. For example, the client computer 2220 can communicate the query at the broadcast time indicated in the synchronization signal 2204. In that case, the interactive remote control 2210 will display the query in synchronization with presentation of the broadcast content 2203 on the broadcast receiver 2205. Alternatively, the  
25 broadcasting time information in the synchronization signal 2204 can include a delay to allow presentation of the query on the interactive remote control 2210 at a desired time after presentation of the broadcast content 2203 on the broadcast receiver 2205. Accordingly, the client computer 2220 can control the time at which the interactive remote control 2210 presents the query by controlling the time at which the client  
30 transmitter/receiver 2215 transmits the query to the interactive remote control 2210, based on the information in the synchronization signal 2204.

In another alternative exemplary embodiment, the client computer 2220 can transmit the synchronization signal 2204 to the interactive remote control 2210 via the client transmitter/receiver 2215. In that case, the processor 2304 can present the query on the display 2306 based on the broadcasting time information in the synchronization signal 2204. Accordingly, the processor 2304 can control the time at which the interactive remote control 2210 presents the query by controlling the time at which the query is presented on the display 2306.

In an exemplary embodiment, the server computer 2230 (or the web site presented by the server computer 2230) also can notify the recipient via the display 2306 of the interactive remote control 2210 of desirable content available on other television channels. The desirable content can comprise CRÄV ads being presented on different networks at different times. Alternatively, the desirable content can comprise any pre-selected content, such as breaking news, selected sports teams, selected entertainers, selected TV shows, or other content for which the recipient requested notification of its broadcast. Accordingly, the recipient can change channels to view the desirable content, in response to the notification received from the server computer 2230. As discussed with reference to Figure 28, the interactive remote control 2210 can automatically tune the broadcast receiver 2205 to the station channel on which the desirable content will be presented, in response to the notification received from the server computer 2230. Thus, the recipient can pre-select content for which the recipient desires notification of its broadcast. When the server computer 2230 detects broadcasting or subsequent broadcasting of the pre-selected content, the server computer 2230 can generate and communicate a synchronization signal 2204 comprising an identification of the content, the broadcast time, and the broadcast station channel. The display 2306 presents the information from the synchronization signal. Then, the recipient can tune the broadcast receiver 2205 to the desired station channel to view the pre-selected content. Alternatively, the interactive remote control 2210 can automatically tune the broadcast receiver 2205 to the desired station channel for presentation of the pre-selected content. The recipient can configure the interactive remote control for either manual or automatic operation.

The client transmitter/receiver 2215 can interact with multiple interactive remote controls 2210 within a single location by referencing a unique MAC address of the

respective interactive remote control 2210. In that exemplary embodiment, the client computer 2220 can recognize the MAC address to determine which interactive remote control 2210, and indirectly which recipient, is interacting.

5 A MAC address comprises a hardware address that uniquely identifies each node on a network. When a recipient registers with CRAV, the recipient provides his demographics (age, sex, address, salary, education, etc.) to obtain a registration number. Then, the user associates the MAC address of his interactive remote control 2210 with his registration number. Multiple recipients can use the same interactive remote control 2210 based on their individual registration numbers and the MAC address. For example, a  
10 family of four can each have different registration numbers. Each time one of the family members logs into the server computer 2230 via the interactive remote control 2210, the server computer 2230 can identify the particular individual based on the registration number. Accordingly, the server computer 2230 can communicate queries about the broadcast content 2203 based on the demographics of the family member that is currently  
15 using the interactive remote control 2210.

In an alternative exemplary embodiment, the server computer 2210 can communicate generic queries that are not based on the demographics of the individual recipients. Accordingly, non-registered (and registered) recipients can receive the queries and respond. Additionally, the broadcast content 2203 can comprise the query, and the  
20 recipient can respond to that query via the interactive remote control 2210.

The exemplary embodiment illustrated in Figure 22 depicts a single recipient interacting with the broadcast content 2203 using the interactive remote control 2210. However, multiple recipients can simultaneously receive and interact with the broadcast content 2203 presented on multiple broadcast receivers 2205 by connecting multiple client  
25 computers 2220 to the server computer 2230 and by coupling multiple interactive remote controls 2210 to the multiple client computers 2220.

The exemplary embodiment illustrated in Figure 22 depicts a “two-part” interactive television process, where the broadcast network 105, utilizing existing broadcast technology and infrastructure, broadcasts the interactive content (and queries) to  
30 the recipients (consumers 110), and the recipients respond via the Internet-connected information gathering system. The recipients, utilizing the interactive remote control 2210 connected to the Internet, send query responses to the web site on the sever computer 2230

and receive/interact with any other queries sent to the recipient via the Internet 2225. The Internet web site on the server computer 2230 can collect, process, or data harvest the responses, or can send that information to the data storage center 195 (as in the CRÄV interactive ad process). Additionally, a third party "synchronization service" can  
5 synchronize the posting of queries and follow-up queries to the broadcast content 2203, ensuring that timely and accurate information is sent and collected through the interactive remote control 2210. In some instances, the synchronization service can be automated by the Promoter, television network, cable network, satellite network, or server computer, or the broadcaster can provide these services on their own, manually or in an automated  
10 manner.

For an exemplary embodiment, the interactive remote control 2210 provides interactive television services as its primary function. The interactive remote control 2210 optionally allows the recipient to remotely control a television or home theater system to control the power, volume levels and channels being viewed on the broadcast receiver  
15 2205. The interactive remote control 2210 can utilize two integrated communication transmitters – one to interact with the client computer 2220 (i.e., utilizing RF), and one to transmit channel control signals 2212 (i.e., utilizing IR). The same or different keys or buttons on the interactive remote control 2210 can be utilized to enter interaction input (query responses) as well as television controls. Such an interactive remote control 2210,  
20 serving only to provide interactive television services along with television remote control functions, can be constructed and sold at prices that will attract mass consumer purchases.

In an exemplary embodiment, the client computer 2220 can comprise a cable set-top box or satellite receiver, which performs the separate, dual functions of the client computer 2220 and the broadcast receiver 2205. The cable set-top box or satellite receiver  
25 can comprise a back channel that communicates information over a telephone or Internet connection to the server computer 2230. That back channel is different from the channel or medium used to broadcast the content from the broadcast network 105 to the broadcast receiver 2205 component of the cable set-top box or satellite receiver.

Other components (not shown) of the interactive remote control 2210 comprise an  
30 internal rechargeable (or replaceable) battery system sufficient for untethered operation from a hard-wired power source. The interactive remote control 2210 also can comprise charging contact points for connecting to a charging cradle, or an alternate DC power

plug, to allow periodic charging of the device. Alternatively, the interactive remote control 2210 can comprise a removable battery compartment, which can utilize disposable or rechargeable batteries. The interactive remote control 2210 can comprise sufficient memory and processing power to conduct calculations, interactive events, and remote control functions. The interactive remote control 2210 can allow for future expansion through one or more card slots (for the addition of PCMCIA cards or flash memory cards, etc.), as well as the ability to add new keyboard skins to allow special interactive applications that may be introduced in the future.

Figure 24 is a flowchart depicting a method 2400 for remotely interacting with broadcast content 2203 according to an exemplary embodiment of the present invention. The method 2400 will be described with reference to Figures 22, 23, and 24. In step 2405, the broadcast network 105 broadcasts content 2203 to multiple recipients. In step 2410, the interactive remote control 2210 tunes the broadcast receiver 2205 to the desired station channel for receiving the broadcast content 2203. Step 2410 will be discussed in more detail with reference to Figure 25. Additionally, an alternative exemplary method for tuning the receiver to the desired channel will be described with reference to Figure 28.

In step 2415 the broadcast receiver 2205 receives and presents the broadcast content 2203. In step 2420, the query is presented on the interactive remote control 2210. Step 2420 will be discussed in more detail with reference to Figure 26. Alternatively, the query can be presented on the broadcast receiver 2205 as part of the broadcast content 2203.

In step 2425, the recipient communicates a response to the query via the interactive remote control 2210. Step 2425 will be discussed in more below with reference to Figure 27. In step 2430, the data storage center 195 determines whether the recipient's response comprises a correct reply to the query. Then, in step 2435, the data storage center 195 awards a prize to a recipient that submitted a response comprising a correct reply to the query. Each response comprising a correct reply to the query indicates that the respective responding recipient was exposed to the selected portion of the content about which the query asked a question.

Figure 25 is a flowchart depicting a method 2410 for tuning the broadcast receiver 2205 to the desired station channel according to an exemplary embodiment of the present invention, as referred to in step 2410 of Figure 4. The method 2410 will be

described with reference to Figures 22, 23, and 25. In step 2505, the recipient inputs the desired station channel into the interactive remote control 2210 via the channel control keypad 2310.

In step 2507, the processor 2304 generates a channel control signal 2212 comprising instructions to tune the broadcast receiver 2205 to the station channel input by the recipient via the channel control keypad 2310. Then, in step 2510, the channel control transmitter 2312 transmits the channel control signal 2212 to the broadcast receiver 2205. In step 2515, the broadcast receiver 2205 receives the channel control signal 2212 and tunes to the desired station channel based on the instructions in the channel control signal 2212. The method then proceeds to step 2415 (Figure 24).

Figure 26 is a flowchart illustrating a method 2420 for presenting the query on the interactive remote control 2210 according to an exemplary embodiment of the present invention, as referred to in step 2420 of Figure 4. The method 2420 will be described with reference to Figures 22, 23, and 26. In step 2605, the broadcast network 105 communicates the synchronization signal 2204 for presentation of the query about a selected portion of the broadcast content 2203. In an alternative exemplary embodiment, the server computer 2230 can generate and communicate the synchronization signal 2204. The synchronization signal 2204 can comprise information indicating a broadcasting time at which the broadcast content 2203 will be presented on the broadcast receiver 2205, as well as the station channel upon which the broadcast receiver 2205 will present the broadcast content 2203. The synchronization signal also can comprise the query about a selected portion of the broadcast content 2203. Alternatively, the server computer 2230 can add the query to the synchronization signal 2204.

In step 2610, the server computer 2230 communicates the synchronization signal 2204 to the client computer 2220 via the Internet 2225. In step 2615, the client computer 2220 transmits the synchronization signal 2204 through the client transmitter/receiver 2215 to the interactive remote control 2210 via an interactive communication signal 2217.

In step 2620, the interactive remote control 2210 receives the interactive communication signal 2217 comprising the synchronization signal 2204 via the interactive transmitter/receiver 2302. Then, in step 2625, the processor 2304 parses the query from the interactive communication signal 2217 and displays the query on the display 2306 based on the broadcasting time in the synchronization signal 2204.

In an exemplary embodiment, the interactive remote control 2210 displays the query based on the broadcasting time as a result of actions from the server computer 2230. In that case, the server computer 2230 communicates the query to the client computer 2220 based on the broadcasting time information in the synchronization signal 2204. Accordingly the query is communicated to the interactive remote control 2210 at the appropriate broadcasting time for synchronization with presentation of the broadcast content 2203 on the broadcast receiver 2205.

In an alternative exemplary embodiment, the interactive remote control 2210 displays the query based on the broadcasting time as a result of actions from the client computer 2220. In that case, the client computer 2220 transmits the query to the interactive remote control 2210 based on the broadcast time information in the synchronization signal 2204. Accordingly, the client computer 2220 transmits the query to the interactive remote control 2210 at the appropriate time for synchronization with presentation of the broadcast content 2203 on the broadcast receiver 2205.

In another alternative exemplary embodiment, the interactive remote control 2210 displays the query based on the broadcasting time as a result of actions from the processor 2304 of the interactive remote control 2210. In that case, the interactive remote control 2210 receives the synchronization signal 2204 and the query via the interactive communication signal 2217. Then, the processor 2304 determines the appropriate time to present the query on the display 2306 based on the broadcast time information from the synchronization signal 2204. Accordingly, the processor 2304 presents the query on the display 2306 at the appropriate time for synchronization with presentation of the broadcast content 2203 on the broadcast receiver 2205.

Presenting the query “in synchronization with” presentation of the broadcast content 2203 comprises presenting the query based on the broadcasting time of the broadcast content 2203. In that regard, the query can be presented simultaneously with presentation of the broadcast content 2203, at a predetermined time prior to presentation of the broadcast content 2203, or at a predetermined time after presentation of the broadcast content 2203.

Referring back to step 2625 in Figure 26, the method proceeds from step 2625 to step 2425 (Figure 4).

Figure 27 is a flowchart depicting a method 2425 for communicating a response to the query via the interactive remote control 2210 according to an exemplary embodiment of the present invention, as referred to in step 2425 of Figure 4. The method 2425 will be described with reference to Figures 22, 23, and 27. In step 2705, the recipient inputs a response into the processor 2304 of the interactive remote control 2210 via the interactive response keypad 2308. Then, in step 2710, the interactive transmitter/receiver 2302 of the interactive remote control 2210 transmits the recipient's response from the interactive remote control 2210 to the client transmitter/receiver 2215 of the client computer 2220. In step 2715, the client computer 2220 communicates the recipient's response to the server computer 2230 via the Internet 2225. In step 2720, the server computer 2230 communicates the recipient's response to the data storage center 195. The method then proceeds to step 2430 (Figure 4).

An on-line, real-time connection to the Internet program that allows the recipient to utilize an interactive remote control 2210 is an optimal utilization of the process and device. However, the client computer 2220 also can download its interactive content on a time-delayed basis, and utilizing time-stamped sensitive, encrypted software, can simulate real-time distribution of interactive information to the interactive remote control 2210. That software can be designed so that the recipient cannot access the interactive data unless it is unencrypted on a time-sensitive basis, synchronizing the distribution of the interactive content (queries) with the related interactive broadcast content 2203. The client computer 2220 can store the responses, optionally attaching accurate time stamped information (which also may be encrypted to prevent tampering by the recipient or others), to verify timely responses. Thereafter, the client computer 2220 can forward the responses to the server computer 2230 (information gathering system 112) when a periodic connection to the Internet 2225 is established. In one exemplary embodiment, the broadcast content 2203 can provide the recipient with a password that, when entered on the interactive remote control 2210 or client computer 2220, unlocks or unencrypts the information stored in the interactive remote control 2210 or client computer 2220. Accordingly, a real-time Internet connection is not required during interaction, which also creates less demand on the Internet, as well as telephone land lines used by dial-up Internet service recipients.

While interactive television broadcast of CRÄV ads is one application for the use of this system and process, as well as for the use of the interactive remote control 2210, those skilled in the art will recognize that any type of broadcast content, such as radio broadcasting, could benefit from the use of this method of providing interactive content, and the interactive remote control 2210 can be used to interact with sound-only, broadcast content as well.

Figure 28 is a flowchart depicting a method 2800 for remotely controlling presentation of broadcast content according to an exemplary embodiment of the present invention. The method 2800 will be described with reference to Figures 22, 23, and 28. In step 2805, a synchronization signal 2204 is generated. The synchronization signal 2204 indicates a subsequent (or current) broadcast time of the broadcast content 2203 and the corresponding station channel for presentation of the broadcast content 2203. As shown in Figure 22, the broadcast network 105 can generate the synchronization signal 2204. In an alternative exemplary embodiment, the data storage center 195 or the server computer 2230 can generate the synchronization signal 2204.

In step 2810, the server computer 2230 communicates the synchronization signal to the client computer 2220 via the Internet 2225 based on the broadcasting time in the synchronization signal. In step 2815, the client computer 2220 transmits the synchronization signal 2204 to the interactive remote control 2210 via the client transmitter/receiver 2215. Then, in step 2820, the interactive remote control 2210 automatically tunes the broadcast receiver 2205 to the station channel in which the receiver will present the broadcast content 2203. Step 2820 will be discussed in more detail below with reference to Figure 29.

In step 2825, the broadcast network 105 broadcasts the content 2203 to multiple recipients (consumers 110). In step 2830, the broadcast receiver 2205 receives and presents the broadcast content 2203 on the station channel. As illustrated in Figure 28, the method 2800 can automatically tune the broadcast receiver 2205 to the desired station channel at the appropriate time for receiving the broadcast content 2203.

As discussed above, the server computer 2230 communicates the synchronization signal at the appropriate time based on the broadcasting time in the synchronization signal. In an alternative exemplary embodiment, the client computer 2220 can transmit the synchronization signal at the appropriate time based on the broadcasting time in the

synchronization signal. In another alternative exemplary embodiment, the processor 2304 can generate the channel control signal 2212 at the appropriate time based on the broadcasting time in the synchronization signal.

Figure 29 is a flowchart depicting a method 2820 for tuning the broadcast receiver 2205 to the station channel on which the receiver will present the broadcast content 2203 according to an exemplary embodiment of the present invention, as referred to in step 2820 of Figure 28. The method 2820 will be described with reference to Figures 22, 23, and 29. In step 2905, the interactive transmitter/receiver 2302 of the interactive remote control 2210 receives the synchronization signal 2204 from the client transmitter/receiver 2215. In step 2910, the processor 2304 generates a channel control signal 2212 comprising instructions to tune the broadcast receiver 2205 to the station channel provided in the synchronization signal 2204.

Then, in step 2915, the channel control transmitter 2312 transmits the channel control signal 2212 to the broadcast receiver 2205. In step 2920, the broadcast receiver 2205 receives the channel control signal 2212 and tunes the receiver to the station channel, as instructed in the channel control signal 2212. The method then proceeds to step 2825 (Figure 29).

Figure 30 is a block diagram depicting an interactive remote control 3000 according to an alternative exemplary embodiment of the present invention. As shown, the interactive remote control 3000 comprises the components illustrated in Figure 23 for the interactive remote control 2210. Additionally, the interactive remote control 3000 comprises a microphone 3002 and a speaker 3004 to allow two-way voice communication. The microphone 3002 receives voice from the recipient and communicates the recipient voice to the interactive transmitter/receiver 2302. The interactive transmitter/receiver 2302 transmits the recipient voice to the client transmitter/receiver 2215 for input into the client computer 2220. Additionally, the speaker 3004 can communicate sender voice received via the interactive transmitter/receiver 2303 from the client transmitter/receiver 2215 of the client computer 2220. Accordingly, the interactive remote control 2210 can provide two-way voice communications, thereby comprising a voice over Internet protocol ("VOIP") telephone.

In an exemplary embodiment (not shown), the microphone 3002 and speaker 3004 can be provided by a headset, or separate earpiece and microphone, that plug into the processor 2304.

5 In an exemplary embodiment, the recipient voice can be transmitted between the interactive remote control 2210 and the client transmitter/receiver 2215 in analog form for input into the client computer 2220. Then, the client computer 2220 can process the analog recipient voice using conventional VOIP software to communicate the recipient voice as a VOIP telephone call. Additionally, the client computer 2220 can receive VOIP sender voice via the Internet 2225 and can convert the sender voice to analog form. Then,  
10 the client computer 2220 can communicate the analog sender voice via the client transmitter/receiver 2215 to the interactive remote control 2210.

In an alternative exemplary embodiment, the interactive remote control 3000 can comprise an analog-to-digital converter (not shown). The analog-to-digital converter can convert the analog recipient voice to a digital signal before transmitting the digital  
15 recipient voice signal to the client transmitter/receiver 2215. Additionally, the interactive remote control 3000 can receive digital sender voice signals and can convert the digital sender voice signals to analog signals for communication via the speaker 3004. The interactive remote control 3000 also can comprise software that performs the VOIP conversion process. In that case, the interactive remote control 3000 can convert the  
20 digital recipient voice to a VOIP signal and can transmit that VOIP signal to the client transmitter/receiver 2215. Additionally, the interactive remote control 3000 can receive VOIP sender voice signals from the client transmitter/receiver 2215, convert those VOIP sender voice signals to analog signals, and communicate the analog signals via the speaker 3004.

25 To further enhance the desirability of the interactive remote control 2210, certain on-board functionality and hardware can be added to increase the number of tasks the device can accomplish. For example, utilizing the display and multifunction keypad and enabling the device to perform simple or complicated calculations using onboard memory and processors, can allow performance of mathematical calculations prompted by a  
30 televised, educational program or game show, which response can subsequently be transmitted from the control 2210 through the wireless connection to the computer, and subsequently to the hosting web site. The control 2210 can be linked or registered to an

individual or logged-in user, such that the mathematical response can be matched with the user, who can be a student or contestant.

5 Additionally, or alternatively, the control 2210 can be manufactured and equipped with a card scanner (not shown), which can enable the user to “swipe” an ID or credit card through the scanner, allowing the user to either “log-in” to the control 2210, or to conduct an Internet-connected transaction. The ID card can enable multiple individuals to quickly log-in and log-out of a single control 2210, in the event of a time-sensitive CRÄV ad, such that more than one person can answer the requisite queries, logout, and then a new user can swipe an ID card, log-in, respond, and logout. In the event a user wishes to purchase  
10 something seen on a CRÄV ad, or program, or when prompted by an on-screen prompt or invitation to purchase, the use of an actual credit card, as opposed to simply typing the credit card number, provides a more secure and convenient transaction for both users and vendors.

Furthermore, the indirect Internet connection to the control 2210 can allow users to  
15 communicate over the Internet with others connected to the Internet, and with other similar device owners. Simple typed messages sent from the control 2210, using the keyboard, or multi-purpose keys that enable both device controls and communication, can enable chatting between others connected to the hosting website, or simply to the Internet. Typed information can be sent from one control 2210, through the Internet, and to the  
20 intended recipient(s), and can be viewed on the display 2306.

As discussed with reference to Figure 30, should the control 2210 be equipped with an earpiece and microphone (which can be discretely incorporated into the control 2210), the control 2210 also can utilize new or emerging VOIP technology, which will send voice packets or streams received from one control 2210, to the client computer 2220  
25 connected to the Internet, over the Internet, to computers also connected to the Internet, and ultimately to other users using Internet-enabled devices that allow them to accept, hear, and communicate with voice or data that is transmitted and intended for their receipt. Conventional software and hardware can enable users of the voice-enabled control 2210 to connect with traditional telephones. However, a more secure and less error-prone  
30 environment exists for VOIP between devices connected through a dedicated network, enabled for VOIP. In such an environment, such as two individuals using two controls 2210, connected through an Internet-based network designed to allow those controls 2210

(and users) to communicate, clear voice communications can be enabled, with limited or no packet loss, and at little or no cost to the users.

Indeed, with current voice recognition software, two users on opposite sides of the globe can find each other and communicate over the Internet, simply by one owner (User 1) enabling the control 2210 to communicate by “switching” to phone mode by saying “Phone” into the microphone, by then saying “Find Joe Smith” into the microphone, such that the individual named Joe Smith (who had been identified at an earlier time by User 1, such that only the specific Joe Smith can be connected) can be alerted on his control 2210 (via audible tone or ring, information displayed on the display 2306, vibration, or some combination of these or other alert methods), and Joe Smith can then talk to User 1. Long-distance charges do not apply in such a scenario, further enticing recipients to purchase controls 2210 enabled to interact with CRÄV ads and queries.

In exemplary embodiments, the interactive remote control 2210 can be enabled to control multiple audio and video devices, receive and respond to CRÄV ads or other content, “chat” or “Instant Message” with other Internet and control 2210 users, perform and optionally transmit via the Internet calculations made from the control 2210, purchase items over the Internet by swiping a credit card, and send and receive VOIP communications to other control 2210 users, Internet-connected users, or traditional land-based or wireless telephone users. The same series of connections (and hosting website) that enables interaction with CRÄV ads also can enable all other Internet-based functions conducted by the control 2210.

The interactive response keypad 2308 can be “switched” or enabled, if necessary, to allow secondary functions, such as alphanumeric “typed” functions (which can be illustrated on the display, and then “transmitted” to another user, to allow chat or instant messaging functions) or calculator functions (the process or results of which also can be transmitted to another user, or to a hosted web site that collects these calculated responses, such as an educational or gaming website). The control 2210 can be designed in a compact form factor that most closely resembles a remote control or telephone, allowing one-handed control.

In another exemplary embodiment, the interactive remote control can omit the channel control transmitter. In that case, the interactive remote control can comprise a

query-response device that can display a query about a selected portion of broadcast content and can allow a recipient to input and transmit a response to the query.

Figure 31 illustrates the form factor of an interactive remote control 3100 according to an exemplary embodiment of the present invention. The interactive remote control 3100 will be described with reference to Figures 22, 23, and 31. As illustrated, the exemplary interactive remote control 3100 can comprise a compact form factor of a conventional audio/visual remote control or telephone handset. That compact form factor can allow one-handed control by a user.

The interactive remote control 3100 comprises a primary keypad 3102 that allows a user to perform traditional remote control functions to remotely control audio-visual components. A secondary keypad area 3104 allows the user to perform ancillary remote control functions to remotely control other component functions. For example, the secondary keypad area 3104 can allow the user to control video cassette recorders, digital video disk players, personal video recorders (PVRs), or other components. Additionally, the secondary keypad area 3104 can allow the user to perform CRÄV response functions. The CRÄV response functions can comprise selecting multiple choice answers and transmitting those answers to the client computer 2220.

The interactive remote control 3100 also comprises a display 3106. The display 3106 can comprise an LED or LCD display screen, a passive or active matrix type color display, or any other suitable display. The display can present queries received by the interactive remote control 3100, responses input by the user, or other text messages.

The interactive remote control 3100 can comprise a channel control transmitter 2312 (not shown) to transmit channel control signals 2212 (or other audio-visual control signals) and an interactive transmitter/receiver 2302 (not shown) to transmit and receive interactive communication signals 2217.

In an exemplary embodiment, the push buttons in the primary keypad area 3102 can be "switched" or enabled to allow secondary functions. The secondary functions can comprise alphanumeric "typed" functions, calculator functions, or other functions. The alphanumeric typed functions can input text to the display 3106, which then can be transmitted to the remote computer 2220. The transmitted text can comprise a query response, instant messages, or other messages. The calculator functions can allow interaction with educational or gaming content that require the user to calculate responses

to queries. In another exemplary embodiment, the secondary functions can comprise telephone dialing.

For telephone functions, the interactive remote control 3100 comprises an earpiece/speaker 3108 and microphone 3110. The speaker 3108 and microphone 3110 can be discreetly located on the front or rear of the device to allow two-way voice communications.

The interactive remote control 3100 also can comprise a card swipe and reader device (not shown) on one side to read magnetic strip information from a card to obtain login information or to conduct consumer transactions.

The exemplary interactive remote control 3100 illustrates a consolidated device enabled to control multiple audio and video devices, receive and respond to CRÄV ads or other content, "chat" with other Internet and interactive remote control 3100 users, perform and transmit calculations, purchase items over the Internet by swiping a credit card, and send and receive VOIP communications to and from other interactive remote control 3100 users, Internet-connected users, or traditional land-based or wireless telephone users.

As illustrated in Figure 31, the interactive remote control 3100 can comprise the balance, weight, design, and dimensions of a conventional multi-function ("universal") remote control for controlling audio/visual components, thereby allowing one-handed use by the operator. The appearance of the interactive remote control 3100 can comprise the appearance of a conventional remote control. Accordingly, consumers can recognize the interactive remote control 3100 as a multi-function remote control that can replace conventional remote controls for various audio/visual components, plus the additional advantage of enabling remote interaction with advertising or other broadcast content.

Consumers desire such one-handed control of their remote control device. Consumers desire a single remote control that performs multiple functions, rather than multiple remote controls that each perform a single function. The exemplary interactive remote control 3100 can provide such one-handed, multi-function control, plus the ability to interact with broadcast content. For marketing purposes, the appearance of a conventional remote control can cause consumers to recognize that the interactive remote control comprises a multi-function remote control. Upon further inspection, consumers can recognize the additional features of interaction with broadcast content and remote

telephone functionality. Furthermore, if one family member is hesitant about purchasing a remote control to interact with broadcast advertisements or other content, the multi-function remote control appearance and functionality can persuade that family member to purchase the interactive remote control 3100, because the interactive remote control 3100 can replace multiple remotes owned by the family and can provide the additional interactive functionality.

Figure 32 is a flow chart depicting a method 3200 for real-time capturing of audience share information for broadcast content 2203 according to an exemplary embodiment of the present invention. The method 3200 will be described with reference to Figures 22, 23, and 32. As illustrated in Figure 32, the method 3200 can comprise steps described previously with reference to the method 2400 of Figure 24.

Referring to Figure 32, in step 2405, the broadcast network 105 broadcasts content 2203 to multiple recipients. In step 3210, the broadcast network 105 broadcasts a content identification signal with the broadcast content 2203. In an exemplary embodiment, the broadcast network 105 can embed the content identification signal in the broadcast content 2203. In alternative exemplary embodiments, the broadcast network can receive content already comprising the content identification signal and can subsequently broadcast the received content. The content identification signal can comprise information to identify the broadcast network, a channel specific to the broadcast network upon which the content is broadcast, or the specific advertising or other content being broadcast.

In an exemplary embodiment, the content information signal can comprise an inaudible, high frequency signal comprising information that identifies information about the broadcast content. For example, the information can comprise the broadcast network, channel, date, time, type of content, sponsor, or other content information. Any suitable signal for conveying the content information can be used.

In step 3215, the method 3200 determines whether a particular recipient received the broadcast content 2203. Step 3215 will be discussed in more detail below with reference to Figure 33.

After determining that particular recipients received the broadcast content 2203, the method 3200 follows the method 2400 to verify exposure (immersion) of the particular recipients to the broadcast content 2203. Accordingly, the method 3200 performs steps 2420-2435, discussed previously with reference to Figure 24.

Figure 33 is a flow chart depicting a method 3215 for determining whether a particular recipient received broadcast content 2203 according to an exemplary embodiment of the present invention, as referred to in step 3215 of Figure 32. The method 3215 will be described with reference to Figures 22, 23, and 33.

5 In step 3305, the interactive remote control 3000 listens for the broadcast content identification signal. In an exemplary embodiment, the interactive remote control 3000 can listen for the content identification signal by monitoring sounds collected via the microphone 3002. In that embodiment, the processor 2304 can interpret sounds collected via the microphone 3002 to determine if the sounds comprise a content identification  
10 signal.

In step 3310, the interactive remote control 3000 determines whether it has detected a content identification signal. If the broadcast receiver 2205 is not turned on or is not tuned to the proper channel, then the broadcast receiver 2205 will not present the broadcast content 2203 or the content information signal. In that case, the interactive  
15 remote control 3000 does not detect the content information signal via its microphone 3002. Accordingly, the method branches to step 3315. In step 3315, the processor 2304 determines that the broadcast content is not being presented at its location.

If the broadcast receiver 2205 is turned on and tuned to the proper channel, then the broadcast receiver 2205 will present the broadcast content 2203 and the content  
20 information signal. In that case, the interactive remote control 3000 can detect the content information signal via its microphone 3002. Accordingly, the method 3215 branches from step 3310 to step 3320. In step 3320, the processor 2304 determines that the broadcast content is being presented at its location based upon receipt of the content identification signal.

25 In step 3325, the processor 2304 records receipt of the broadcast content identification signal. In an exemplary embodiment, the processor 2304 can record the date and time of receipt, as well as the identifying information for the broadcast content. In step 3327, the processor 2304 communicates the recorded receipt of the content identification signal to the data storage center 195 by transmitting the recorded receipt to  
30 the client transmitter/receiver 2215 via the interactive transmitter/receiver 2302. Accordingly, the data storage center 195 can determine the number of broadcast receivers 2205 that are presenting the broadcast content 2203.

If desired, the method 3215 can confirm that a recipient actually is being exposed to the broadcast content. For example, if the recipient is not in the room with the broadcast receiver, then the recipient is not being exposed to the broadcast content 2203 being presented by the broadcast receiver 2205, even though the interactive remote control 3000 located in the room is receiving the content information signal. Accordingly, in step 3330, the server computer 2230 can communicate a confirmation query to the client computer 2220 for transmission to the interactive remote control 3000 via the client transmitter/receiver 2215. The interactive remote control 3000 can receive the transmitted confirmation query and can present the confirmation query on the display 2306. In an exemplary embodiment, the confirmation query can comprise, "Are you watching?" In other exemplary embodiments, the interactive remote control can vibrate or emit a sound to gain the recipient's attention to the confirmation query.

In step 3335, the method 3215 determines whether a response to the query has been received. If the recipient is not present to receive the broadcast content 2203, then the server computer 2230 will not receive a response to the confirmation query. Accordingly, the method branches to step 3340 in which the server computer 2230 confirms that the recipient did not receive the broadcast content because the server computer 2230 did not receive a response to the confirmation query. Then, in step 3345, the server computer records that the recipient did not actually receive the broadcast content, even though the interactive remote control 3000 did detect the content identification signal. In step 3350, the server computer 2230 communicates the record of non-receipt to the data storage center 195 for audience share calculation.

If the recipient is present to receive the broadcast content 2203, then the recipient responds to the confirmation query by entering a response in the interactive remote control 3000 and by transmitting the response from the interactive remote control 3000 to the client transmitter/receiver 2215 for subsequent communication to the server computer 2230. In that case, the method 3215 branches from step 3335 to step 3355 in which the server computer 2230 verifies exposure of the recipient to the broadcast content based on receipt of the response to the confirmation query.

In an exemplary embodiment, the confirmation query can comprise additional queries communicated with, or separately from, the original confirmation query. For example, the additional confirmation query can ask the recipient to enter his demographic

information or to enter demographic information for other recipients receiving the broadcast content with him. Accordingly, follow-up queries can be tailored to the demographics of particular recipients not previously registered in data storage center 195.

In step 3360, the server computer 2230 records that the recipient received the broadcast content. Then, in step 3365, the server computer 2230 communicates the recorded receipt to the data storage center 195 for audience share calculation. The method then proceeds to step 2420 (Figure 32).

As discussed above, the method 3200 can record viewer habits of individual viewers via the interactive remote control. Additionally, if recipients log into the server computer using the interactive remote control, then the server computer can determine the demographics of individual viewers that receive the broadcast content. The method 3200 can provide real-time monitoring of viewer habits by detecting presentation of the broadcast content and forwarding that information to the data storage center for audience share calculation.

If a query regarding a specific portion of the broadcast content comprises a simple answer, such as a multiple choice answer, then a person may get the answer correct by guessing. However, the method 3200 can confirm that the recipient actually is viewing the content. Accordingly, if the recipient did not respond in step 3335 to indicate that he is receiving the content, then the method 3200 can prevent that recipient from receiving the query presented in step 2420. Accordingly, the method 3200 can confirm the immersion verification process.

In an exemplary embodiment, individual recipients can configure their respective interactive remote controls to allow capturing the audience share information or to disable that feature. In another exemplary embodiment, capturing the audience share information can be configured for full-time operation.

In an exemplary embodiment, the interactive remote control used with the method 3200 comprises each component illustrated in Figure 30. In other exemplary embodiments, the interactive remote control can comprise more or less components than those illustrated in Figure 30. For example, in one exemplary embodiment, the interactive remote control can comprise a query-response device that receives queries and transmits input responses to the queries, and also transmits a record of receiving the content identification signal. In another exemplary embodiment, the interactive remote control

can comprise a device the transmits a record of receiving the content identification signal. Accordingly, the method 3200 can be implemented with different interactive remote controls that perform different levels of functionality.

## 5 Example of Interactive Remote Control

Exemplary embodiments of the present invention enable the following exemplary scenarios:

Mr. and Mrs. Jones, and their daughter Pam, own 3 interactive remote control devices. Their home has an always-on broadband connection to an ISP that is  
10 CRÄV enabled, and the interactive remote control devices are linked to the Internet through a client transmitter/receiver attached to a personal client computer in the study of their home.

Mr. & Mrs. Jones are watching a pre-recorded program on the family room television. The program is stored on the hard drive of a PVR device. The hard drive has  
15 stored every televised program that has aired in the last 14 days, and Mr. Jones has selected the program because he and Mrs. Jones enjoy the show. During recorded commercial breaks, either Mr. or Mrs. Jones skip over the content in thirty second increments from their individual interactive remote control devices. Mr. Jones' interactive remote control device is blue, and Mrs. Jones' is red. The Jones have an agreement that  
20 they will skip all commercials after viewing the first two seconds. If one party wants to watch the commercial, that party will hit the "rewind thirty second" button, signifying their interest in the ad. This rarely occurs.

The Jones have enabled a feature that allows the CRÄV website to notify them when a live CRÄV ad (pre-selected content) with prizes in excess of \$25,000 is about to  
25 air on any cable channel. At 8:42 PM, the blue and red interactive remote control devices vibrate, and immediately after, both devices transmit a signal to the television that overrides the PVR, and places the digital cable set-top box to channel 434. Within 3 seconds, a CRÄV alert is broadcast and appears on-screen, announcing that ten fourteen day vacations for two to New Zealand will be awarded to registered CRÄV  
30 players who correctly answer the CRÄV query that follows one of the following four ads.

The Jones watch all four ads carefully. Then, on the broadcast channel and on the interactive remote control displays, a query ad appears. The broadcast query is about the

soft drink ads that aired; the query on Mr. Jones' display is about the automobile ad that aired; and the query on Mrs. Jones' display is also the soft drink ad query. Ten seconds later, three multiple choice answers appear on the television screen, as well as on both interactive remote control displays. The selections are different on Mr. Jones' display, 5 than on the broadcast channel and on Mrs. Jones's display. Mrs. Jones feels that before answering, she wishes to view the soft drink commercial again, so she "rewinds" the programming, which is stored on the PVR device, and watches the soft drink ad a second time. Mr. Jones selects choice "B" by pressing the "B" button on his interactive remote control, and then presses the "CRÄV" button, which transmits his selection to the CRÄV 10 website, while also resetting his device to allow traditional remote control functions. Mrs. Jones watches the soft drink commercial again, locates the information that matches one of the multiple choice answers, and presses "C" on her interactive remote control, followed by the "CRÄV" button, which transmits her selection to the CRÄV website.

The CRÄV website recognizes both the selections, and also receives with the 15 selections unique identifier information that allows the data storage center to match each response with the query and the user identification information.

Following the responses by the Jones's, the PVR pre-recorded programming returns to the screen. However, Mrs. Jones' interactive remote control display shows a second query, that asks if she would like to receive two free cases of the new soft drink 20 advertised on the commercial. She would only have to pay \$2 for shipping and handling. She elects to accept the offer, so she presses the "YES" button, and then swipes her credit card on the card reader. The display asks for a PIN number, which she enters. Finally, the display explains that her order was received, that \$2 was charged to her account under the charge name "Free Case Promo," and that she will receive the cases and a \$3 off coupon 25 good on her next purchase of that soft drink within 10 business days.

Meanwhile, upstairs, Pam is doing her homework, which is broadcast on channel 885. She is studying various subjects. History questions are posed on screen, and multiple choice answers are displayed on her interactive remote control display. She selects and transmits her answers. The home personal computer recognizes the signal 30 being sent from her interactive remote control device (which is camouflage colored), and transmits her choices through the CRÄV-enabled website, to a database that collects her choices and grades her responses. Pam is periodically asked mathematical questions, and

her interactive remote control is enabled to perform calculations. She transmits the results of her calculations. When she gets an answer correct, her display notifies her as such. When she gets an answer wrong, the device beeps and invites her to try again. After two wrong attempts, the display will display the correct answer and also teaches the correct method of calculating the correct answer. The correct answer and explanation are transmitted from the hosting web site, through the CRÄV ISP provider, to Pam's interactive remote control device.

After she finishes her homework, Pam says "Phone" into the microphone, and then says "Find Susan." The interactive remote control transmits the commands to the ISP, that recognizes the voice commands, opens up network connections to allow VOIP functionality, and then matches Pam's "Find Susan" command with a user registered by Pam, "Susan Rogers," who owns an interactive remote control as well. The system recognizes that Susan Rogers is connected to the network as well. Susan's interactive remote control sounds a ring tone. Susan picks up her interactive remote control device and sees on the display that Pam Jones is trying to reach her. Susan says "Hello" into the microphone. The device recognizes that the "Hello" command in Susan's voice is to enable voice communications, and the two parties are connected and conduct a five minute VOIP conversation.

Lastly, several miles away, Grandma Jones is at her home, using her interactive remote control device (which her son purchased over the Internet, using his interactive remote control device and card scanner). Suddenly, Grandma feels a sharp pain in her chest. She immediately presses a special "Emergency" sequence of buttons on her interactive remote control. This sequence of buttons alerts her personal computer to send an emergency message to the CRÄV-enabled web site, which alerts an individual who is monitoring the web site to contact EMS providers in the area of Grandma Jones. Three minutes later, armed with Grandma Jones's medical history, EMS arrives at her home, and they begin administering medical attention. As she is placed on the stretcher and taken to the hospital, she clutches her interactive remote control to her chest.

Simultaneous to the EMS alert, Mr. Jones is also notified on his interactive remote control that his mother has activated her interactive remote control emergency functions. Moments later, his display reveals that she was taken to the local emergency room. Mr. Jones speaks into his interactive remote control device "Intercom," and then says, "Pam,

come here.” Upstairs, Pam’s interactive remote control device’s speaker sounds out “Pam, come here.” Pam rushes downstairs, to hear that Grandma is being rushed to the hospital. The entire family runs to the car and arrives at the emergency room fifteen minutes later.

5 An hour later, the Jones’ are ushered to a private room where Grandma is resting comfortably, interactive remote control still held close to her body. Grandma recognizes her son and family, and with a tear in her eye thanks her son for the thoughtful gift of a interactive remote control, which saved her life.

10 Meanwhile, at home in his absence, Mr. Jones’ interactive remote control device sounds a special tone. Then, his display flashes a message that will remain on the screen until he arrives home several hours later. The Jones’ are going to New Zealand.

15 Although specific embodiments of the present invention have been described above in detail, the description is merely for purposes of illustration. Various modifications of, and equivalent steps corresponding to, the disclosed aspects of the exemplary embodiments, in addition to those described above, also can be made by those skilled in the art without departing from the spirit and scope of the present invention defined in the following claims, the scope of which is to be accorded the broadest interpretation so as to encompass such modifications and equivalent structures.